

LITTELL'S LIVING AGE.

Fifth Series, }
Volume XXIII. }

No. 1782. — August 10, 1878.

{ From Beginning,
{ Vol. CXXXVIII.

CONTENTS.

I. GIORDANO BRUNO AND GALILEO GALILEI,	<i>Quarterly Review,</i>	323
II. A DOUBTING HEART. By Miss Keary, author of "Castle Daly," "Oldbury," etc. Part IV.,	<i>Advance Sheets,</i>	340
III. AMONG THE BURMESE,	<i>Fraser's Magazine,</i>	354
IV. THE STORY OF A LETTER. By Julia Kavanagh,	<i>Argosy,</i>	366
V. WHAT THE SUN IS MADE OF. By J. Norman Lockyer,	<i>Nineteenth Century,</i>	374
VI. SEEING THE PRINCESS,	<i>Saturday Review,</i>	381
VII. ADMIRAL SIR GEORGE BACK,	<i>Nature,</i>	384

POETRY.

STUDIES FROM THE ANTIQUE,	322	THE FORGET-ME-NOT,	322
-------------------------------------	-----	------------------------------	-----

PUBLISHED EVERY SATURDAY BY
LITTELL & GAY, BOSTON.

TERMS OF SUBSCRIPTION.

For EIGHT DOLLARS, remitted directly to the Publishers, the LIVING AGE will be punctually forwarded for a year, free of postage.

An extra copy of THE LIVING AGE is sent gratis to any one getting up a club of Five New Subscribers. Remittances should be made by bank draft or check, or by post-office money-order, if possible. If neither of these can be procured, the money should be sent in a registered letter. All postmasters are obliged to register letters when requested to do so. Drafts, checks and money-orders should be made payable to the order of LITTELL & GAY.

Single Numbers of THE LIVING AGE, 13 cents.

STUDIES FROM THE ANTIQUE.

KASSANDRA.

I.

VIRGIN of Troy, the days were well with thee
 When, wandering singing by the singing
 streams
 Of Ilion, thou beheld'st the golden gleams
 Of the bold sun that might not faced be

Come murmuring to thy feet caressingly;
 But best that day when, steeped in noontide
 dreams,
 The young Apollo wrapped thee in his
 beams,
 And quenched his love in thine as in a sea!

And later, in thy tower 'twas sweet to teach
 The loveless night the joys high day had
 known;
 To dream, to wake, — and find thy love im-
 peach
 Late sleep with kisses, and thy spirit flown
 To his, and at the ivory gates of speech
 Breaking in words as burning as his own.

II.

How far from Ilion, and how far from joy,
 Captive Cassandra, wert thou, when in
 sight
 Of conquering Greece thou satest on thy
 height
 Of shame, — a waif from out the wreck of
 Troy!

Thine still the burning word, but slave's em-
 ploy
 Had from thy trembling lip effaced quite
 The kisses of the god, and heaven's light
 Now shone upon thee only to destroy.

For thee, sun-stricken one, th' abysmal sties
 Of sin lay open as the secret grave, —
 Things of which speech seemed madness, —
 while thy cries
 On wronged Apollo lost the way to save;
 Till at the last, the faith of upturned eyes
 Brought him to right, as death, to free the
 slave.

KLYTEMNESTRA.

I.

DAUGHTER of gods and men, great ruling will,
 Seething in oily rage within the sphere
 Which gods and men assign the woman
 here,
 Till, stricken where the wound approved thee
 still

Mother and mortal, all the tide of ill
 Rushed through the gap, and nothing more
 seemed dear
 But power to wreck high ruin, nothing clear
 But the long dream you waited to fulfil.

Mother and spouse, — queen of the king of
 men, —

What fury brought Ægysthus to thy side? —
 That bearded semblant, man to outward ken,
 But else mere mawworm, made to fret man's
 pride;

Woman, thy foot was on thy tyrant then!
 Mother, thou wert avenged for love defied!

II.

Woman and Greek, — so doubly trained in
 art! —

Spreading the purple for the conqueror's
 tread,
 Bowing with feline grace thy royal head, —
 How perfect, whelp-robbed lioness, thy part!

One wrong the more to wring the ancient
 smart,
 Then three swift strokes, and the slow hope
 blooms red;
 Who shamed the hero lays him with the
 dead,
 Where nevermore his word may vex her heart.

Bold queen, what were to thee the gods of
 Greece?

What had been any god of any name,
 More than the lion-heart you made to cease —
 Or the live dog to all your humors tame?
 The very furies left your soul in peace
 Until Orestes' sword drove home their
 claim.

Contemporary Review. EMILY PFEIFFER.

THE FORGET-ME-NOT.

MARK the forget-me-not by yon brookside.
 Its roots the mud, its stem the waters hide;
 Its blossoms seek the sky.
 So, though thy feet be rooted in earth's slime,
 Raise thou thy head above the waves of time —
 Look up on high!

See how the blossoms, earthward-bent awhile,
 Turn as they ope to meet the sun's bright
 smile,
 And, as they upward gaze,
 First flush with pink, then mirror heaven's
 own blue,
 And every flow'ret bears, of sunny hue,
 A crown of rays.

O thou whose thoughts are fixed on this
 world's toys,
 Look up to Him from whom are all thy joys.
 The beatific sight
 Will change thee till the human grow divine,
 And at the last upon thy brow shall shine
 A crown of light.

Sunday Magazine. MARGARET COX.

From The Quarterly Review.
GIORDANO BRUNO AND GALILEO
GALILEI.*

No two characters in history invite a Plutarchian comparison and contrast more naturally than those of Giordano Bruno, the "knight-errant of philosophy," as he was nicknamed in his own time, and Galileo Galilei, the genuine martyr of exact science.

Bruno and Galileo were the first conspicuous champions of the Copernican or modern astronomy, and the former first awakened towards it the ominous attention of the Holy Roman Inquisition. The Nolan philosopher-errant had unluckily preceded the Pisan professor in the popular exposition of the Copernican system, and he purposely placed that system in the light necessarily most obnoxious to ecclesiastical prejudices, by including in his view of it the unhesitating assumption of a plurality of inhabited worlds, peopled similarly to our earth. From that assumption he explicitly drew those heretical inferences which were afterwards fastened gratuitously on Galileo. Neither Copernicus before him, nor Galileo after him, hazarded any such speculations as to the manner in which the other planets of our system, or of other systems, might or might not be peopled. But Bruno revelled in them, and made them the main ground of his argument against the creed of Christendom and for the necessity of a new religion, harmonizing with the new astronomy. It was much as if Voltaire had preceded Newton, and had so treated astronomical questions as to create an in-

separable association in the clerical and common mind between a revolution in science and a revolution in religion and morals.

Galileo has been accused by all the apologists of his ecclesiastical persecutors of having gratuitously mixed up questions of science with questions of religion; and his imputed invasion of a province, which he had no legitimate motive to meddle with, has been described as having provoked that papal crusade against modern astronomy which has damned Urban VIII. and his holy office to everlasting fame.

Not a word of all this is true of Galileo. Every word of it is true of Giordano Bruno. Unlike as were the characters and careers of Bruno and Galileo—in every respect but irrepressible intellectual activity, however differently directed—it is difficult to avoid the impression that the destinies of the former may have very considerably and unhappily influenced those of the latter. The Roman Inquisition successively pounced on both, though not, it must be admitted, with equal excess of severity. It burned Bruno, and never certainly had it lighted on human fuel more manifestly predestined, in that age, to burning. It only intimidated Galileo into solemn and deliberate perjury, into abjuration of truths he had clearly demonstrated and continued to hold, which his persecutors perfectly well knew that he continued to hold, and therefore, by extorting verbal abjuration of them from a harassed and infirm old man, made themselves mainly responsible for the hollow and hypocritical performance of what can only be designated as a most impious and sacrilegious farce.

Giordano Bruno's is one of those names which, in the course of centuries, have gathered round them a sort of darkened glory. If he had fallen upon another age and another country—instead of being burned at Rome, he might have shone brightly, as a professor of philosophy, at Berlin or Munich. He might have lectured, like Schelling, on "the Absolute," and "the Point of Indifference between Extremes,"—a position identical with the *coincidentia oppositorum* of Bruno—or,

* 1. *Jordano Bruno*. Par Christian Bartolmæss. 2 vols. Paris, 1846.

2. *Vita di Giordano Bruno da Nola*. Scritta da Domenico Berti. Firenze, 1868.

3. *Galilée, les Droits de la Science et la Méthode des Sciences Physiques*. Par Th. Henri Martin. Paris, 1868.

4. *Il Processo Originale di Galileo Galilei*. Pubblicato per la prima volta da Domenico Berti. Roma, 1876.

5. *Galileo Galilei und die Römische Curie. Nach den authentischen Quellen*. Von Karl von Gebler. Stuttgart, 1876.

6. *Les Pièces du Procès de Galilée. Précedées d'un Avant-propos*. Par Henri de l'Épinois. Rome—Paris, 1877.

7. *Die Acten des Galilei'schen Processes. Nach der Vaticanischen Handschrift herausgegeben*. Von Karl von Gebler. Stuttgart, 1877.

like Hegel, on "the Unity of Existence and Thought," and "the Perpetual Evolution of the Idea."

It is mentioned amongst the multifarious mental occupations of the late Baron Bunsen, that he had studied Giordano Bruno with peculiar interest and with deep sympathy. "The work of Bartolmæss of Strasburg," he said, "gave me occasion of becoming more nearly acquainted with that strange, erratic, comet-like spirit, marked by genius, but a *Neapolitan*, whose life was but a fiery fragment."*

A fiery fragment, literally consumed in fire at last. Not the less characteristic of that unparalleled era of intellectual renaissance in Italy, which commenced in classicism, was closed by Jesuitism; which was cradled in the Platonic academy founded at Florence by the first illustrious chiefs of the Medicean line, and was entombed in the Holy Office instituted at Rome by Pope Paul III.; which had for its first martyr of modern philosophy Giordano Bruno, for its second confessor Galileo.

The character and career of Giordano Bruno furnish the most signal example of all that was irregular and anarchical in that immense intellectual as well as æsthetic movement, the transitory glory of the sixteenth century in Italy. The character and career of Galileo exemplify all that was genuinely scientific, and really religious, in that movement. We should be disposed to regard the unbridled license on all subjects, which so singularly and strangely distinguished Bruno, as a natural reaction, on the one hand, against the complete self-prostration of intellect dogmatically demanded by the Church of Rome, and, on the other, as a natural product of the entire emancipation of intellect practically encouraged by the universities, in those free disputations *de omnibus rebus et quibusdam aliis*, which were thrown open by time-honored usage to all academic speakers and all hearers. It was only on submissive minds that monastic discipline produced its designed effects: the reaction therefrom, in restless and inquisitive spirits like Bruno's, could scarcely fail to drive them from implicit acceptance of

unreasoned rule to indiscriminate revolt from all rule. What the Church had afterwards to condemn she may seem to have herself generated. Bruno was the natural child of Dominicanism, as Voltaire of Jesuitism. He may be said to have anticipated the most "advanced" solutions of all questions which he chose to consider open. And he chose to consider all questions open. He may be looked upon as the last of those stray philosophers, in quest of fame and of bread, who had formed, in the Middle Ages, a sort of international republic of letters, whereof all the universities of Europe were recognized as component parts, graduation in one of which opened all the rest to lectures and disputations *de omni re scibili* by their itinerant members.

But let us begin at the beginning of the wayward and erratic career of the first of those representatives of the nascent modern mind in Italy, whom M. Berti has made the subjects of his successive studies.

Whether Giordano Bruno, who was born about 1550 and baptized by the name of Philip—but, on entering a religious order, followed the usual ecclesiastical etiquette of giving himself a new name—was of high or low descent (he himself claimed the former) seems not very clearly ascertained. So much however is clear, that he was of rather poor parentage, and, during the whole course of his errant exercise of philosophy, he had to live upon his wits—on the money contributed by the auditors attracted to his disputations and lectures. He had donned the religious dress as the age of fifteen, in the Dominican convent at Naples, and before the expiration of his novitiate he had expressed himself slightly to a fellow-novice about a mystical manual, which he found him reading, on the subject of the seven beatitudes of the Virgin. "What!" he asked, "would you not find the reading of the lives of the holy Fathers more edifying?" Young Bruno had, moreover, cleared out his cell, by giving away all the images it contained of saints, male and female, keeping only a crucifix. Upon these indications the "master of the novices" commenced formal proceedings

* Memoirs of Baron Bunsen, vol. ii., p. 254.

against the boy heretic, but had the good sense or good feeling to drop them. Bruno's next outbreking, however, in the like direction, was followed by more serious consequences. Before he was eighteen, says his biographer, he had begun to doubt of the principal dogmas which the Church imposes on the belief of the faithful. Finally, after taking orders, at twenty-three, he gave still fuller and more unbridled scope to his heterodox opinions. Thus, at each successive stage of outward ecclesiastical progression, he developed and disclosed an inward stage of mind at variance with it. Proceedings were again taken against the young Giordano — this time by higher authority; and there could be no doubt about the peril of the position in which he had placed himself. He took flight from Naples, and found a temporary halting-place at the Dominican Convent of the Minerva at Rome; but soon, finding that the charges brought against him at Naples had been duly forwarded to Rome, he took flight from thence also, throwing off his monastic habit, and went forth into the world, as the fairy-tales say, to seek his fortune.

On escaping from Rome, our philosopher-errant had resumed his baptismal name of Philip, and, as we have already stated, had cast off his garb of Dominican monk. With his usual inconsistency of conduct, he very soon resumed that garb, but without any further attempt to re-enter the order. In those times this was nothing new or unusual. Botta, the historian of Italy, states that there were then some forty thousand Italian monks living outside the walls and rules of their convents. On his arrival at Geneva, after experiments of living in Italy, which seem to have all failed, Bruno was counselled by a distinguished Italian refugee once more to divest himself of his monastic habits, these being quite out of fashion in the city of Calvin. Accordingly, he converted portions of them into hose, and his Italian fellow-refugees gave him a hat and cloak. Those refugees had, some years previously, espoused the creed of the Evangelical Church; and their recognized leader, who had first accosted Bruno on his arrival at Geneva, bore one of the highest patri-

cian names of Naples. This was Galeazzo Caracciolo, Marquis of Vico and nephew of Pope Paul IV., who, to the deep disgust of his family, had embraced the creed of Calvin.

But Bruno had shot far past Calvin and Beza in his views of a new theology. And, as he avowed afterwards, in his examinations before the inquisitions of Venice and Rome, he could neither adopt a religion, the basis of which was faith without works, nor reconcile to his mind a scheme of Church government, which empowered the State to punish with the sword all who dared to avow dissent from its doctrines. Formularies and confessions of faith were then the prevailing fashion, whether at Rome or Geneva. The Italian refugees had been compelled (much against their philosophical conscience, their leanings having been commonly Arian) to subscribe a rigidly Calvinistic confession. There was no rest or place for religious revolters from Rome who would not restrict themselves within the rigid bounds of the theology of Geneva; and revolters, like Bruno, from one theocracy could not bring themselves to acquiesce in another. "Lutheranism," observes our biographer, "was, in this respect, more to their minds than Calvinism." Bruno, in particular, very soon found that there was as much wood for burning heretics at Geneva as at Rome and Naples.

At Geneva our philosopher-errant was treading on ground which had shortly before been strewn with the ashes of Servetus. At Toulouse — where he obtained a professorship, notwithstanding his antecedents (which were perhaps unknown), and lectured on Aristotle's three books "On the Soul" — he was again treading on ground shortly afterwards to be strewn with the ashes of Vanini. During two years and a half (for him an unusual interval of repose) there must have been either a lull in the intolerant spirit of his audiences, or a pause in the indulgence of his own heretical impulses. It was during that interval that he held some conferences, which came to nothing, like those he afterwards held with the papal nuncio at Paris, as to what means could be used to enable him to re-enter the order he

had quitted. But it was fated that poor Bruno's Dominican frock never should be put on again, save to be stripped off, as preliminary to its wearer being burned at the stake.

"Our Giordano," says M. Berti, in relating his first sojourn and lectures in Paris, "was the true type and ideal of the free professor of those times. In Toulouse, in Paris, in London, in Oxford, in Wittemberg, in Prague, in Zurich, in Frankfort, he took the professor's chair, and gave lectures, without seeking protection or favor in any quarter. He migrates from university to university, opens school against school, and when he encounters any opposition or obstacle he turns his steps elsewhere." In his examination before the Venetian Inquisition, Bruno says of himself, "I went to Paris, where I set to work lecturing to make myself known." The substance of his teaching seems to have had for a main ingredient the Lullian art of memory, mixed up with the physical, metaphysical, and astronomical novelties, which he never failed of introducing in all his lectures, and which never failed to produce scandal and to create a disturbance. On every subject his powers of improvisation carried his hearers by storm. "He promised," says his biographer, "great things in vague and mysterious language, well calculated to excite curiosity and attention in his audience. Whatever in his utterances was not purposely obscure, was clear, fluent, and impassioned. Whatever the intrinsic value of his lectures, they gained him great fame in delivery." Every one would like to be shown a royal road to knowledge; and royalty itself, in the person of Henry III. of France, showed a desire, which seems to have been not less fleeting than his other caprices, to make acquaintance with this all-promising professor of occult science. Bruno, as he was seldom sparing of invectives on opponents, so failed not to repay in flattery the capricious favors of a patron so far from respectable as the French king of the minions, by extolling him to the skies as "the magnanimous, great, and potent prince, the echoes of whose fame extended to the ends of the earth."

The first, and it might be said the last, real and substantial patronage (except that of the worthy Frankfort booksellers) ever obtained by poor Bruno, was that which he enjoyed in the family of the French ambassador in London, Castelnau de Mauvissière, whose military and political memoirs have made him known to

posterity. About 1583 Bruno had brought royal letters of introduction to that important personage, whose house furnished him, for the first time, an easy and tranquil resting-place, after all the troublous storms which had tossed his private state, and had rendered literary leisure unattainable, if not "life unsweet" — for he seems to have rather liked living in hot water. All Bruno's best works were written on the banks of the Thames, under the hospitable roof and liberal protection of the French ambassador — the more truly liberal, as M. de Mauvissière was a devout Roman Catholic, and had no sort of sympathy with Bruno's free-thinking and heretical proclivities. There must have been, after all, something that attracted personal regard to our poor philosopher-errant, or he could not have made himself an acceptable inmate in the house of an experienced soldier and statesman, with an accomplished wife and a cultivated and amiable family. Bruno was excused from attending daily mass in the ambassador's house, on the plea that, for the present, he regarded himself as excommunicated; and he must certainly have restrained his polemical and profane sallies in the house of a man who emphatically disapproved the theological conferences held about that time, in France and elsewhere, with the forlorn hope of putting an end to religious differences. Religion, said M. de Mauvissière, "*ne se peut bien entendre que par la foy et par humilité*," and it was therefore not likely to be learned by disputation.

Bruno liked London little, with its mud, mobs, and 'prentices — Oxford less. If he presented himself to the notice of the heads of that royally endowed university in his hose, already commemorated, stitched together out of his old Dominican habits, and in the charitably contributed hat and cloak which completed his outfit at Geneva, he must have made a figure anything rather than recommendatory to an honorary degree in the eyes of the magnificent dons of that day, whom he describes as follows: —

Men arrayed in long robes, attired in velvet, with hands most precious for the number of rings on their fingers, which look as if they could belong only to the richest of jewellers, and with manners as void of courtesy as a cowherd's.

To these maligned magnates, however, Bruno addressed a letter through their vice-chancellor, in which he announced himself as teacher of "a theology more exquisite, and a philosophy more refined,

than any that had commonly been professed or delivered." He added, in language not less vainglorious, that he was "the awakener of the slumbering, and the effectual tamer of stubborn and presumptuous ignorance." He attained his object of getting the gates of the sanctuary of science on the banks of the Isis thrown open to him for the delivery of a course of lectures on the "Immortality of the Soul," and the "Quintuple Sphere." His lectures had their usual success of scandal, and soon had to be closed. Bruno's report of Oxford students (*lucus a non lucendo*) was not more favorable than of the Oxford dons of his day.

The scholars [he says] were idle, ignorant, unmannered, undevout, occupied in no studies but drinking and duelling, *toasting* in alehouses and country inns, or graduating in the noble science of defence. In short, they took their ease everywhere, whether in lecture-rooms or in taverns.

The Oxford masters and scholars, whom Bruno encountered on the banks of the Isis, are contrasted with the English gentlemen he met on the banks of the Thames:—

Men loyal, frank, well-mannered, well versed in liberal studies, men who may bear comparison for *gentleness* with the flower of the best-educated Italians [of course, according to Bruno, the natives of his beloved Naples] reared under the softest skies, amidst the most smiling scenery, and richest nature of the world.

The ladies of England came in for their share of honor from the Nolan philosopher; though not for that ardent homage which had lately been lavished on their gracious attractions by Erasmus. Such fervors were reserved by Bruno for Copernicus, Raymond Lully, and Albertus Magnus. Though he sometimes boasted of his *bonnes fortunes*, as of most other things, he had not much of the troubadour or votary of the court of love in his composition, and he betrayed some scorn of the Tuscan poet, languishing for his Laura on the banks of the Sorgue. Yet he had lyrical tributes for some of those English ladies, "the honor of the female sex, all compact of celestial substance." By Erasmus those *nymphæ divinis vultibus, blandæ, faciles*, had been much more warmly extolled, especially for a fashion now only observed on extraordinary and solemn occasions, or under the mistletoe.

Always and everywhere [wrote Erasmus] they receive you with kisses. They kiss you when you meet them, when you part with

them, when you return. If you come back, the sweet kisses begin again; if they leave you, there is a fresh distribution of kisses. Whichever way you turn, you will find everything embellished by their tender commerce. O Faustus, if you had once tasted the delicate perfume of their presence, you would wish to travel—I do not say ten years, as Solon did—but all your life, and to travel always in England.

Bruno's *Wanderjahre* may be said to have comprised all the years of his active life—if a life can be called active which was passed wholly in talking and writing—in teaching Raymond Lully's boasted science of discoursing on all subjects without having studied any. It was the science of the old Athenian sophists all over again. Such a situation, with his natural independence of spirit and fiery temper, threw him only too frequently on the dire necessities of quackery. He had to blow his own trumpet wherever he went, mysteriously to adumbrate arcana to be more fully imparted only to the initiated, and to start paradoxes chiefly aimed at astonishing the ears of the groundlings. The worst fate that could have befallen his paradoxes would have been to have scandalized nobody. "What did the learned world say to your paradoxes?" asked the vicar of Wakefield of George Primrose. "Sir, the learned world said nothing to my paradoxes—nothing at all, sir!" The learned world were less unkind to Giordano Bruno. The university world especially said a good deal to his paradoxes, though not much to their advantage. Wherever he lectured, or wherever he challenged disputations, he could always boast at least of a success of scandal. He made successively Geneva, Paris, London, Oxford, Wittenberg, Helmstadt, Prague, Padua, and Venice, too hot to hold him.

Poor Giordano courted the favor of certainly a curious succession of patrons: Henry III. of France, who asked him whether the art of memory professed by him was an art practised by the aid of nature or of magic; Queen Elizabeth of England; Sir Philip Sidney; the Catholic University of Prague; the Protestant University of Wittenberg; the booksellers of Frankfort-on-the-Main, a city which he found friendly and hospitable, and where he would have done well to have stayed, had he been capable of staying quietly anywhere; and, finally, a young patrician of Venice, Giovanni Mocenigo, who seems to have combined strong intellectual ambition with weak

intellectual capacity, and with moral ability still weaker. Having read one of Bruno's mysterious treatises on his occult science, this idle young nobleman could not be content without luring to his palace in Venice the possessor of all those boasted secrets of the Lullian art of memory, which formed the charlatan part of poor Bruno's philosophical stock in trade. Teacher and pupil soon got tired of each other: the former failed to teach, and the latter to learn, an universal science which had little else than a merely chimerical existence. Bruno, besides, while he made a great mystery of his occult science, made no mystery at all of his open and scoffing heterodoxy. Mocenigo's conscience became alarmed by his confessor, when he exhorted his penitent—who was ready enough to obey the injunction—to denounce the teacher, of whom he was tired, to the Inquisition.

Even independently of his heresy of inhabited worlds innumerable [observes M. Berti] sentence of death would have been passed upon Giordano Bruno. He came before the Holy Office charged with far graver crimes than Paleario, who was strangled and burned for denying the doctrine of Purgatory, disapproving burial in churches, satirizing his fellow-monks, and attributing justification to faith alone. Giordano Bruno was condemned as an *apostate*, having deserted the order in which he had been consecrated priest—as *relapsed*, having been the subject of repeated procedures, without having been thereby reclaimed to a religious life. The relapsed, even when they had shown signs of repentance, were nevertheless delivered over to the secular arm, and were almost always sentenced to perpetual imprisonment: even such of them as had performed acts of penitence were sometimes condemned capitally. Bruno besides was chargeable with the heaviest of all crimes—that of impenitence—almost always punished with fire. The obstinate heretic, whom no office of Christian charity has availed to lead to conversion, shall not only [say the text-books on the subject] be given over to the secular arm, but burnt alive. It was added, "*Quando isti pertinaces vivo igne cremantur, eorum lingua alliganda est, ne, si libere loqui possint, astantes impiis blasphemis offendant.*"*

Everything conspired with Bruno's audacity of temper and recklessness of that conduct in life, which could alone have enabled him to steer safely through the seas of religious discord, to prepare for him the fate which he had voluntarily returned to his country to meet. He was an enthusiastic Platonist, at a period when

Aristotelianism was the sole saving faith, in the eyes alike of dogmatic orthodoxy and alarmed sacerdotalism. "A Platonist in an Aristotelian atmosphere," as Mr. Leslie Stephen says of William Law, "can no more flourish than an Alpine plant transplanted to the lowlands."* The rampant Aristotelians of Bruno's days would have no Platonic plants in their lowlands; or, if any such came there, were presently minded to make firewood of them. "It will be remembered," says M. Bartolmèss, "under what circumstances Bruno's death took place. It was in the midst of an epoch of reaction against Plato and Copernicus—an epoch when Cardinal Bellarmine supplicated Clement VIII. not to tolerate the teaching of Platonic philosophy in the church." "That philosophy," said the learned cardinal, "has too much analogy with Christianity, not to excite fear lest some minds may be alienated from our religion, and attach themselves to Platonism."

The sixteenth century in Italy may be divided pretty equally into two halves; the first of which preserved the Platonic traditions of the Florentine Academy, and the second stiffened into exclusive Aristotelianism and intolerant orthodoxy. In the latter there was an ecclesiastical retrogression into mediæval scholasticism, under the double influence of the new zeal for internal reform in the Church of Rome, and of the external pressure of Spanish preponderance over the Italian governments, which, as in Spain itself, worked mainly through the established ecclesiastical machinery. At the opening of the century, the cultivated mind of Italy, in the highest places of Church and State, had become all philosophic, and more than half heathen. Cardinals wrote plays, and patronized pictorial and poetic art on any rather than sacred subjects. Nay, Clement VII. and his court sat out the performance of Machiavelli's "Mandragola," the last scene of which (the midnight soliloquy of a priestly pander) is the keenest and bitterest satire ever penned by the wit of man on sacerdotal hypocrisy, or self-delusion, at its highest and most comic pitch. All that was changed, however, as far, at least, as appearances went, when the Church had to set her house in order against Luther and Calvin.

The anger of the elder Cato against the Greek philosophers was even exceeded [says M. Bartolmèss] by the exasperation of the

* *Arsenale o Pratica del Sant' Offizio.*

* English Thought in the Eighteenth Century, vol. i., p. 153.

new censors against free thought. The degree of independence, which had been enjoyed by Cusa and Pomponatio, was refused to Campanella and Vanini. Cosmo III. of Florence prohibited the printing of the fine translation of Lucretius by Alexander Marchetti, as an impure manual of Epicureanism. What science demanded was to march unshackled, to live and speak unconstrained. The Church, on the other hand, dreading lest dogma should be sapped by science, naturally strove to suppress it. Thus arose a combat *à outrance* between two interests alike dear to man, but equally exasperated against each other. But for that fatal conflict, to what an elevation might not Italian philosophy have attained! Accordingly, these two half-centuries exhibit a complete contrast. In the career of Bruno that contrast manifests itself from the most various sides. That impudent speaker and writer carried on to the close of the century those traditions of free utterance, which had enjoyed tolerance, and even protection, at its commencement.

It must be admitted that Bruno used and abused to the utmost a "liberty of prophesying," the most moderate exercise of which had ceased to be safe in Italy. What Voltaire wrote of Vanini was equally true of Bruno: "*Il voyagea pour faire fortune et pour disputer; mais malheureusement la dispute est le chemin opposé à la fortune; on se fait autant d'ennemis irréconciliables qu'on trouve de savans ou de pédans contre lesquels on argumente.*"*

But Bruno's crowning imprudence was his habit of satire and invective on the Church to which he still considered himself as in some shape belonging, and which, unfortunately, still considered him as belonging to it, at least for penal animadversion. Bruno had not only been baptized a Catholic, but ordained a priest; and he was thus doubly amenable to Church discipline, when, in his comedy, "*Il Candelaiolo*," he indulged his ribald humor on the most cherished objects of Italian popular veneration: "*Chi vuole agnus Dei, chi vuol granelli benedetti?*" etc., etc., together with a burlesque catalogue of Catholic relics of saints, which our Protestant decorum forbids our reprinting.

Bruno [says M. Bartolmæss] at Wittemberg could not but make his obeisance to the statue of Luther. But did he forget that Catholic Ingolstadt was but a few miles distant? His panegyric on Luther was meant for publication, and, without reflecting on the consequences, he seems to have striven to surpass, in expressions of contempt and hatred for the papacy, the most passionate and the most

unmeasured utterances of Luther himself. "Who is he," demanded Bruno, "whose name I have hitherto passed in silence? The vicar of the tyrant of hell, at once fox and lion, armed with keys and sword, with fraud and force, hypocrisy and ferocity—infecting the universe with a superstitious worship, and an ignorance worse than brutal. None dared oppose themselves to that devouring beast, when a new Alcides arose to restore this fallen age, this degraded Europe, to a purer and happier state."

And it was this same Bruno who, in the last years of his life which he spent at liberty, proposed to lay his revised and corrected works at the feet of his Holiness Clement the Eighth, who, as he says, he has heard loves *li virtuosi*: to lay before him his case, and seek to obtain absolution at his hands for his past excesses, and permission to resume his clerical habits, without returning under regular religious discipline!

It would be unjust to the memory of the unfortunate Nolan precursor of Galileo to leave the impression on those who have not read his writings (and who in England has?) of a mere itinerant, esurient, and irreverent, not to say scurrilous and blasphemous sophist. Such injustice (since Bayle) Giordano Bruno has not suffered from Continental critics. Germany has given him no undistinguished place in her voluminous histories of philosophy, and German philosophy itself has owed some of its rapidly and incessantly dissolving views to his writings. Bruno's distinguishing faculty, as a child of the southern Italian sun, was imagination. That faculty, in the sixteenth century, in Italy, had matter to work upon unequalled in after times; but which, in Bruno's time, proved perilous stuff for philosophic handling. And Bruno's imagination was rather that of a poet than of a philosopher. He carried all sail and no ballast: little wonder if he made shipwreck. His sympathetic but discriminating biographer, M. Bartolmæss, draws his character in very impartial traits as follows:—

Endowed with a talent essentially spontaneous, Bruno seems to lose his power and be thrown off his balance, on all occasions where patient and silent meditation is indispensable; where the main point is to ascertain, to verify, to demonstrate—not merely to affirm confidently, and conclude precipitately. Though highly instructed, he was audacious rather than studious, speculative rather than observant; prone rather to draw on his own ideal stock and deal in *a priori* reasonings, than to collect data for well-grounded conclusions from experience, and from these, with due cir-

* *Dictionnaire Philosophique*, article "*Athéisme*," sect. iii.

cumspection, deduce rules and principles. He did not always care to confront the results of his speculations with the observable phenomena which compose the history of nature and society. He dreaded, or rather disdained, to apply to his own speculations that severe criticism, that unsparing revision, without which the most prolific brains produce in philosophy only ephemeral opinions. Science profits by the lights struck out—the sallies hazarded—by geniuses of that kind, but cannot be said to owe to them its substantial and permanent acquisitions. The most solid and real service such a genius as Bruno can render, is to inflame the soul with a generous ardor for ideal truth.

It is a noticeable coincidence, that the same doge of Venice, Pasquale Cicogna, who signed the decree, on the part of the Venetian government, for the extradition of Giordano Bruno to that of Rome, had signed, a few months before, the appointment of Galileo Galilei as professor of mathematics in the University of Padua. Neither signature, at the time it was affixed, might seem of much moment; but the proceedings which were taken against Bruno by the Roman Inquisition paved the way for those afterwards taken by the same tribunal against Galileo. One and the same principle was involved in both cases: that principle was the assumed right of the Church to control the march of science. And certainly never was science laid more open to censure by its imperfectly qualified representative than in the case of Bruno. So far as burning Bruno went, the Church proved its power. Rome proved her power a second time by condemning the Copernican doctrine in the unexceptionable shape in which that doctrine was presented by Galileo. But by so doing, she discredited forever her authority in the domain of intellect by the despotic abuse of that authority at the dawn of an era which would no longer confound articles of faith with laws of science.

Giordano Bruno had been burnt at Rome in the sight of the multitude flocking to the Eternal City from all parts of Europe to celebrate the jubilee year 1600. Thirty-two years afterwards Galileo was forced from under the feeble protection of the young grand duke Ferdinand of Tuscany before the Roman Holy Office, to answer for his stubborn adherence to the discoveries of modern astronomy, by which that tribunal told him he had made himself vehemently suspected of heresy. The treatment of Bruno, as we have already seen, had been, in a manner, provoked (if that could have justified it) by the multi-

plied indiscretions of the Nolan knight-errant of philosophy. Of the treatment of Galileo Rome herself has become ashamed.

For more than two centuries "the starry Galileo, with his woes," has engaged the world's sympathies; yet it is only within the last few years that proper pains have been taken to place before general readers the plain tale of his trials.

The most impartial review of the relations of Galileo with Rome is found in the pages of his thoroughly conscientious and liberal Roman Catholic biographer, Henri Martin, to whom we are also indebted for the fullest estimate of the scientific labors of his life. "If Bacon," says Sir David Brewster,* "had never lived, the student of nature would have found in the writings and labors of Galileo, not only the boasted principles of the inductive philosophy, but also their practical application to the highest efforts of invention and discovery."

Galileo's great glory was his resolute rebellion from time-honored tradition, and his signal inauguration of the spirit and methods of modern science.

Galileo [says M. Henri Martin] laid it down as a principle always to ascend from exact and mathematically precise observation of effects to positive knowledge of causes and laws. Long before 1637 [the date of Descartes' "*Discours de la Méthode*"], long before 1620 [the date of Bacon's "*Novum Organon Scientiarum*"], Galileo had introduced by precept and example this complete and definitive method of the physical sciences. He had, in so doing, to struggle against the modern peripatetics, against the *a priori* method, handed down from Aristotle, in the study of nature. In his "*Saggiatore*" [assayer], in his "Dialogues on the Two Principal Systems of the World," and more especially in his "Dialogues on the New Sciences"—his last and most finished work—Galileo, in demonstrating the legitimacy and efficacy of his method, lays special stress on that part of it which Bacon had neglected, and without which that method would have been impotent to regenerate the study of physical science. This indispensable part of the experimental observation of physical facts is *the measure of quantities*.

Galileo knew that all physical objects are extended, and consequently by their nature and essence measurable, though they may not always be measurable by the methods and instruments we possess; that all physical phenomena take place in periods susceptible of measure—that physical phenomena must be reducible to movements, some perceptible, others inappreciable by our senses. As regarded all these phenomena, he held that the right method was to measure all that was measurable, and

* Martyrs of Science.

to endeavor to render measurable all that was not already directly so. All who have proceeded *a priori*, from Aristotle to Descartes downward, have arrived at results the falsity of which suffices to condemn their method. Neither ancients, indeed, nor moderns made any mistake about the first principles of pure mathematics, since those first principles, being necessary and evident of themselves, have nothing to fear from any correction in application. But those who have sought to arrive at the first truths of mechanics by the *a priori*, instead of the inductive method, have always deceived themselves with regard to many of those truths.

In a letter addressed, but not sent, to the peripatetic professor, Fortunio Liceti, dictated by Galileo, at the age of seventy-seven, the year before his death, he observed (and the observation comprises the whole substance of his own scientific teaching):—

If the true philosophy were that which is contained in the books of Aristotle, you would, in my mind, be the first philosopher in the world, since you seem to have every passage of that author at your fingers' ends. But I verily think that the book of philosophy is the book of nature, a book which always lies open before our eyes.

The real cause of quarrel between Galileo and the authorities of his age was, that the latter sought their philosophy in books, while he sought his in facts. A blind faith in Aristotle deprived men of the use of their own eyes. Certain ultra-Aristotelians went the length of affirming that Galileo's telescopes were so constructed as to show things which in reality had no existence. He offered a reward of ten thousand scudi to any one who could make such clever glasses as those. Some stubbornly refused to look through his telescopes at all, assured as they were beforehand that they never, by their aid, should see anything that Aristotle had said a word about. And it was not only a few peripatetic philosophers, unversed in astronomy, who talked in this way. Such language was repeated by the able astronomer Magini, professor at Bologna, and at first, also, by the learned Father Clavio, who died at Rome in 1610, but died converted to the faith (by sight) of Jupiter's satellites, the phases of Venus, and the inequalities of the moon's surface. Cremonini at Padua, and Libri at Pisa, refused all credence to Galileo's discoveries, demonstrated as those discoveries were by his telescopes. Libri died at Pisa without having ceased to protest against Galileo's absurdities, or deigned to look

through Galileo's telescopes: upon which the latter wrote (10th December, 1610) that, as the deceased professor would not look at Jupiter's satellites here, he might, perhaps, take a view of them in his way to heaven.

It has often been asked—it was asked, indeed, by Galileo himself—how it happened that a storm of imputations of constructive heresy burst on his head, after having left unvisited that of the first great founder of modern astronomy, Copernicus. Galileo could not, as he said, anticipate that it would be believed at Rome—as it seemed to be believed by Monsignor Gherardini, Bishop of Fiesole—that the doctrine of the earth's motion had been first started by a living Florentine, not by a Polish canon who had been dead seventy years, whose book had been published by special desire of Cardinal Schomberg, and dedicated by express permission to Pope Paul III. But it is not difficult to discern the causes of the different reception, by the reigning philosophical and ecclesiastical authorities at successive epochs, of identically the same scientific truths. Copernicus lay already paralyzed on his deathbed when his work was intrusted to Osiander for publication, and he was therefore in no condition to overrule the timid precautions which his above-named pupil thought requisite in order to avert the wrath of the orthodox theologians and peripatetic philosophers of the day. Osiander's anonymous preface in no manner expressed the mind of his master, who was convinced as firmly, as was afterwards his illustrious Florentine successor, of the solid foundation of his system in the facts of the natural universe, and who would probably have been no more disposed than Galileo was to handle it as a mere working hypothesis, which need not be received as true, or even probable, but as framed solely to facilitate the calculation of astronomical phenomena. The subterfuge was a childish one, but it passed muster with those childish minds of mature growth, then occupying papal or professorial chairs and pulpits. Had Copernicus lived to wield the powers of Galileo's telescope, he, instead of Galileo, might have stood forth the protagonist, and have suffered as the protomartyr, of modern astronomy. The conflict with the spiritual power, which Galileo did not court, but found forced on him, was the "unshunned consequence" of the scientific revolution effected by aid of his telescopic discoveries. The question between the two world-systems, Ptolemaic and Copernican,

as Herr von Gebler justly remarks, had hitherto been exclusively one for the schools. Neither the less-known precursors of Copernicus nor Copernicus himself had ever adventured openly to declare war against the Aristotelian philosophy, or to overthrow, by the unanswerable evidence of observed facts, the hollow fabric of physical science founded on that philosophy.

They had fought with the same weapons as the Ptolemaic doctors; those of the school logic. They did not possess direct evidence of astronomical facts, as they did not yet possess the telescope. But Galileo, with his system of demonstration founded on ocular evidence of the actual facts of nature, was too formidable an antagonist to obtain tolerance from the schoolmen. The peripatetic philosophers had no armor of proof to parry the blows of arguments addressed to the understanding on the direct evidence of the senses; and their adherents accordingly, if they would not give up their cause as lost, must call in aid other allies than those of the schools. They fought accordingly at the readiest means within reach. To reinforce the tottering authority of Aristotle, they invoked the unsailable authority of Scripture.

We must not ascribe this mainly to mere party spirit, or mere personal malevolence. The bulk of the learned class, which still adhered to the old world-system, and had hitherto carelessly regarded Copernicus, with his new theory apparently unsupported by visible proofs, as a mere dreaming speculator, now stood aghast at Galileo's telescopic discoveries, which apparently threatened to overthrow all that had hitherto been believed. The learned, and still more the half-learned, world of Italy felt the solid ground shaking beneath their feet, and the threatened downfall of Aristotle's authority of three thousand years must, it seemed to them, draw after it the overthrow from the very foundation of all that had hitherto been held as truth in physics, mathematics, philosophy, and religion.

If Galileo had been content with making a mere raree-show of his telescopes, or a mere lucrative trade in them, he might have been petted and patronized to the end of the chapter at Rome, as he had been at Venice and Florence. He need have incurred no risk of persecution for truths he might have foreborne to enunciate. But he would have missed the main scope of his life, which was simply to demonstrate those truths. What Galileo's critics really make matter of reproach is his manly frankness and sincerity. Having a plain tale to tell, he saw no reason why he should not plainly tell it. Having no "heretical pravity" to conceal, he too sanguinely anticipated

that he could engage the Roman hierarchy in the pure interest of scientific truth.

It was ecclesiastical rather than philosophical favor that Galileo felt he had most need to conciliate. It was the opinion which might be formed at Rome of his views of the Copernican system, about which he was most solicitous; for, should Rome prove hostile, he knew too well that it would be difficult or impossible for him to exercise with freedom the function of an expounder of those views in Italy.

Belisario Vinta, secretary of the grand duke [of Tuscany] [says M. Bertl], wrote to Galileo, that so soon as the truth of his speculations on the Medicean planets [the satellites of Jupiter, which Galileo had so named in compliment to his Tuscan patrons] should be confirmed at Rome, the new constitution of the universe might be said to be established for all the world, and would be assured of obtaining the concurrence of all mathematicians and all astrologers. This assent of Rome Galileo felt to be of such moment, that he was prepared to make every effort to obtain it. He assiduously cultivated friendly relations with the cardinals, the monsignori, the prelates. But the quarter where he chiefly aimed to conquer opinion was the Collegio Romano, as well because there were amongst its members not a few men well versed in science, as because it constituted a sort of theologico-philosophical tribunal.

The prospects of success for the new science at the metropolis of Latin Christendom seemed at first promising.

Would we form an idea [says M. Bertl] how Galileo was appreciated and courted at Rome, we must figure him to ourselves in the vigor of life, at the age of forty-seven, with ample forehead, grave countenance, expressive of profound thought, fine figure and very distinguished manners, clear, elegant, and pleasing, and at times imaginative and vivid in discourse. The letters of the time superabound in his praise. Cardinals, patricians, and other persons in authority, vied with each other for the honor of having him in their houses, and hearing him discourse. A choice society of men, eminent for learning or high public office, were in the habit of assembling round Cardinal Bandini in the palace of the Quirinal. In the gardens of that palace, which commanded a great part of the city of Rome, and the view from which extends over a vast horizon, Galileo, in the fine evenings of April, exhibited through his telescope the satellites of Jupiter, and discoursed on the subject of his discoveries. It seems that some of the fathers of the Collegio Romano came also to these meetings; and by day Galileo, in these and other places, directed observation to the spots in the sun. Federico Cesi, the young president of the Academy of the Lincei [lynx-

eyed], lavished on him the most affectionate tokens of esteem and friendship. Contemporary writers relate with admiration the sumptuous dinner given by Cesi to Galileo at his villa of Malvasia, on the summit of the Janiculum, not far from the gate of St. Pancrazio, and at which the most distinguished persons in Rome were present. Towards the end of dinner, Galileo having pointed his telescope in the direction of St. John Lateran, the guests were enabled to read the inscription over the portico, three [Italian] miles off, and then, turning the telescope to heaven, they desisted to their full satisfaction the satellites of Jupiter, with other celestial marvels. On that occasion, Galileo, to satisfy the curiosity of the guests, took the telescope to pieces, and allowed every one at discretion to examine the construction, and to take the measure of the lenses.

A number of eminent men in learning and science used to assemble nightly at the Tuscan ambassador's, where Galileo at that time resided, to look through his telescope at Venus, and the "tricorporal," Saturn. One evening, when the clouds interrupted their view of the stars, they began disputing, as their nightly wont was, on the subject of light. Galileo said to Lagalla, that he would let himself be immersed in ever so dark a dungeon, and kept there ever so long a time on bread and water, if only, on coming out, it were granted him to understand the nature of light.

This conversation, and others of the like description, are recorded in contemporary narratives of the first sojourn of Galileo in the Eternal City in 1611. He was to revisit it on four later occasions — in 1615, 1624, 1630, and 1633 — the first three of these latter visits being voluntary, the last compulsory, on the peremptory and reiterated summons of Pope Urban VIII., to present himself in person for examination before the Holy Inquisition.

Amongst the figures which we find crossing the stage during Galileo's first visit to Rome, was that of Cardinal Bellarmine, then full of years and honors. On the 19th of April, 1611, Bellarmine wrote to the reverend fathers of the Collegio Romano, to ask if in any manner there had been brought under their cognisance the celestial observations, which an able mathematician had been making by means of an instrument called *cannone* or *occhiale*, by which means he [Bellarmine] himself had seen some marvellous sights in the moon and Venus. Clavio, a recent and zealous convert to Copernicanism, Griemberger, Oddo Malcotio, and Paolo Lembio, replied officially, on the 24th of the same month, that they had themselves verified all the celestial marvels to which his letter referred.

Although [says M. Berti] we are ignorant for what reason Bellarmine addressed that question to the college, we shall probably not be far from the truth in supposing that the reply requested in such solemn form, and in writing, was not asked of the college solely for his own information, but for that of his colleagues of the Inquisition.

What, we may ask on our part, had Galileo come to Rome for, but to get the stamp of authority put by the Collegio Romano on his virtual adhesion to the Copernican system in his "*Nunzio Siderico*"? The "able mathematician" had been desirous of bringing his new and strange views especially before that college, as containing other able mathematicians, who could speak from chairs of authority. And this end, which Galileo had expressly aimed at, he fully attained. The favorable answer returned by the Collegio Romano to the demand thus made of them was no sooner published, than Galileo's friends at Rome hastened to make it known farther, exulting in the belief that the stamp of orthodoxy had now been set authentically upon the master's most startling astronomical innovations, and that they might henceforth freely discuss his discoveries and the questions raised by them. Monsignor Dini confidentially intimated to Cosimo Sassetti that the Jesuits were great friends of Galileo. The Tuscan "orator" [ambassador] at Rome presented Galileo to the pope [Paul V.] who received him most graciously, not suffering him to say a word before him in a kneeling posture. Encouraged by these favorable indications, and taking occasion from the opposition to his discoveries stirred up by some Perugian monks, Galileo addressed a letter to Monsignor Dini, not only exposing with all the force of logic, and all the keenness of sarcasm, the fallacy of the argumentations attempted by his monkish opponents, but putting in the clearest light the principles of criticism in their application to science. From Galileo's highly obnoxious proposition, that *the earth was a planet*, his simple or subtle opponents sought to fasten on him the gratuitous inference that all the other planets must be inhabited by beings of our own species. It was then asked whether these had descended from Adam, and whether they had embarked with Noah.

The first open war on Galileo's astronomical innovations was declared by monkish ignorance. The irregular-regular monastic militia of papacy were the first to beat the "drum ecclesiastic," and essay to rally round them the great army of block-

heads in a new crusade against light and knowledge. On the fourth Sunday of Advent, 1614, Caccini, a Dominican monk, preached a sermon in the church of Santa Maria Novella, at Florence, on the astronomical miracle of Joshua, taking his text from the Vulgate — "*Viri Galilæi, quid statis aspicientes in cælum?*" This punning text was followed by a furious sermon against all mathematics, which the preacher declared were an invention of the devil, and against all mathematicians, who, he said, should be excluded from all Christian states. Father Maraffi, a Dominican friend and admirer of Galileo, immediately wrote to him to express his disgust at this abuse of the pulpit — the more so, he said, as its author was a brother of his own order, and he should have to share the responsibility of all the stupidities (*tutte le bestialità*) which might be, and were, committed by thirty or forty thousand monks.

Father Caccini, instead of being censured or punished, was invited to Rome, as master and bachelor at the convent of Santa Maria della Minerva; and another brother of the same order, Father Lorini, secretly wrote to the Roman Holy Office, not expressly naming Galileo, but denouncing the *Galileists*, who affirm that the earth moves, and the sun stands still. Father Lorini declares that the Galileists therein assert an opinion visibly contrary on all points to Holy Scripture, that they trample under foot the entire philosophy of Aristotle, and vent a thousand impertinences only to show their wit. He concludes by quoting the sermon of Caccini against "the Galilæans," which was the sure way to get the father summoned as a witness before the Holy Office — as he accordingly was, and added a quantity of second and third hand hearsay, the greater part of which was too worthless to find favor even with an inquisitorial tribunal, and the rest irrelevant to the charges in course of collection against Galileo by the underground agencies of the Holy Office of Rome.

M. Henri Martin here abruptly asks — "What was it these cardinals of the Inquisition really meant?" Maffeo Barberino, Del Monte, Bellarmine, were well-wishers to Galileo personally. They meant, in a word, to spare the man, while stifling the system. This was not, however, what Galileo wanted, or would willingly submit to. In letters to Monsignor Dini, he avowed that the earth's double movement was for him, as it had been for Copernicus, a serious and positive doctrine, not a mere hypothesis, which might be regarded as false or indifferent. In a justification of him-

self, drawn up by Galileo at the period before us, not for publicity, but for communication "to some wise and just persons," he asks:—

What could be expected to be the consequence of an authoritative condemnation of the Copernican system? Such a condemnation would not convince men of learning and science, who do not feel themselves at liberty to believe the contrary of those truths of nature, which observation and experiment enable them, in a manner, to see with their eyes, and touch with their hands. It would, therefore, be necessary to prohibit all study whatever of astronomical science—that is to say, all study of those works of nature in which the power and wisdom of God display themselves with most magnificence.

It has been assumed in some quarters, and the assumption is endorsed by M. Martin, that Galileo's second visit to Rome (at the close of 1615) was not quite voluntary, as had been his first in 1611. According to these reports, he had been secretly summoned to present himself before the Inquisition. Galileo's own account, given to the inquisitors themselves in 1633, as well as in all his letters to his friends, was, that this second visit, like his first, was made by him entirely of his own accord. Now, setting aside for the moment all reliance on Galileo's habitual frankness and veracity, is it credible that he should make a false statement on such a point to his judges, who had immediate means of checking it by referring to the records of their own office? It is not improbable, however, that he may have been *invited* by his friends in the congregation to come to Rome to defend his writings in person against the more serious of the charges which were brought against them. We may here remark that it was always on the provocation and challenge of his assailants, that Galileo meddled at all with theological controversy. What excited their anger was, not that he was heterodox in theology, but that he warned off theology from ground which was not properly her domain. His counsels to theology to leave science unmolested were precisely such as might be addressed, in our own age, by rational believers to irrational zealots. Unfortunately, the sincere or pretended zealots in the days of Galileo, when Aristotle was cited, with such grotesque audacity, in support of Scripture, were too strong for the small minority of enlightened students of nature, whose religion was scientific, and whose science was religious.

Galileo's second visit to Rome ap-

peared afterwards to have been the crisis of his fate; the turning-point of all his after-life from prosperous to adverse fortunes. The great mistake he made did not consist, as Sir David Brewster would have it, in any wanton disregard or defiance of "the laws of the Church," nor "bold and inconsiderate expression of his opinions" through the channel of the press (the two documents, addressed, the one to Father Castelli, the other to the dowager grand duchess of Tuscany, which gave his enemies the first handle taken against him, were not printed at all); his great mistake was his too sanguine persuasion that he could get those who wielded the highest powers of the Church at that epoch to see that neither her laws nor her honest interest was concerned in the question whether the sun moved round the earth, or the earth round the sun. Such was Galileo's own intimate and sincere conviction; and it was his sublime confidence in the force of truth that inspired his efforts to bring round popes and cardinals, who had other objects in view, to share that conviction. Sir David Brewster, following Mallet du Pan, and other such untrustworthy authorities, and taking no note of the facts, which were not then in their entirety before the world, affirms that Galileo, to be safe, needed but to have abstained from turning a philosophical into a theological question; and that, had he concluded his "system of the world" with the sage peroration of his apologist Campanella, and dedicated it to the pope, it might have stood in the library of the Vatican, beside the cherished, though equally heretical, volume of Copernicus.

"The cherished, though equally heretical, volume of Copernicus!" Why, the volume of Copernicus was put on the Roman index by a decree dated the 5th of March, 1616, and remained on the index till the 16th of August, 1820! The doctrine contained in that work, of the sun being the centre, and the earth not being the centre of our system — the mobility of the latter and fixity of the former in that system — had been declared, in February, 1616, by the cardinals of the Roman Inquisition to be "absurd, heretical, and contrary to Holy Scripture." That was the position on which Rome took her stand at the epoch of Galileo's second visit. No other ground could be assigned for any admonitory (not to say penal) procedure against Galileo, than the ground laid in the secret passing of that decree of the Inquisition, since no other offence could be

imputed to him than that he had founded his theory, in his recently published "Letters on the Spots in the Sun," on that of Copernicus. With similar secrecy, the decree of the Inquisition condemning the Copernican doctrine was communicated to Galileo by Cardinal Bellarmine and a promise was exacted from him that he would, in future, neither *hold* nor teach that doctrine in any shape. Bellarmine himself, and Maffeo Barberini, afterwards Pope Urban VIII., were personal friends of Galileo; they had no sympathy with the ignorant or hypocritical zealotry of the Caccinis and Lorinis; and, at the time we are speaking of, they inspired the Inquisition with their own friendly dispositions, so far as regarded the person of the philosopher who had alarmed their orthodoxy. Accordingly, Galileo's name was not even mentioned in its decree condemning Copernicus, and Cardinal Barberini afterwards, when pope, in 1633, complained vehemently of ill-usage and ingratitude on the part of Galileo after he had helped him, as he said, out of his scrape in 1616. That Galileo could not be content to hold his tongue, petted and pensioned as he was both by a pope and by a grand duke, was a mystery of iniquity and perversity that his too gracious Holiness could not have anticipated, and could not be expected to pardon.

Those who censure Galileo for failing to keep his secret promise to Bellarmine, seem to forget that, for sixteen or seventeen years, he kept as much of that promise as could well be expected — that is to say, he forbore, though it was pain and grief to him, from further publications on the obnoxious and tabooed subject. It was not till his friend, Maffeo Barberini, had climbed to the highest place in the Roman hierarchy with a diplomatic dexterity only equalled by his autocratical arrogance when he had once reached it, that Galileo, by a second sanguine mistake, supposed he might give himself license to evade the inhibition which had secretly been laid on him at so great a distance of time. He had hastened to Rome, on the urgent advice of his friend Prince Cesi, the president of the Lyncean Academy, to congratulate Maffeo Barberini on his elevation to the papal chair, and was received by the new pope with an eager cordiality which might well inspire confidence. The Florentine philosopher, in his single-minded devotion to his main object in life, had not sufficiently studied the character of the man he had now to deal with. Everything depended

with Urban on hitting his humor or caprice of the moment. "No pope," says Ranke,* "ever raised such arrogant claims to personal respect." And nothing that he could deem disrespect to aught he had ever dictated was likely to be viewed by the new pontiff in any other light than that of "contempt of court"—and of himself as the supreme head of that court—to which, and to whom, were to be submitted with implicit deference all matters bearing on its sovereign spiritual authority, whether directly or indirectly. Pope Urban had said to Cardinal Hohenzoller—who repeated to Galileo—that the Church had not condemned this system (the Copernican system), and that it should not be condemned as heretical, but only as rash; and he added that "there was no fear of any one undertaking to prove that it must necessarily be true."

In half-a-dozen audiences, which his Holiness had vouchsafed to grant Galileo, this very subject of the Copernican system had been discussed between them with perfect freedom; and it was natural to infer from the pope's expressions to Hohenzoller, that he would be disposed to tolerate the like freedom of discussion in print, provided it were pushed to no positive or decisive conclusion. Upon that hint Galileo wrote and printed. Papal vengeance pursued him to the last hour of his life.

If Galileo misunderstood his patron, it is only charitable to believe that Urban understood no better his *protégé*, soon to become his victim. How, indeed, should they have understood each other? The personal characters and aims were as widely different as the personal positions of the two men, who came thus suddenly and unexpectedly in collision. Galileo was solely intent on extending the empire of science—Urban on asserting the authority and enlarging the estates of the Church. While the former sought worldly means so far only as they were indispensable to obtain leisure for his researches, the latter mainly (that we may not say solely) made use of his spiritual power and prestige to promote the temporal aggrandisement of his see and his family, which had indeed become the all but exclusive object of the popes for two centuries.

It has been supposed that Urban took personal offence at the imagined application to himself of the name of Simplicio, which Galileo had given to the Ptolemaic

champion in his "Dialogues on The Two Principal Systems of the World." The other two interlocutors bore real names—those of the Florentine Salviati and the Venetian Sangredo, friends of Galileo, the former of whom personates the true (*i.e.* Copernican) philosopher in the discussion, and the latter intervenes as an umpire between the combatants. The pope had, indeed, sycophants enough about him, capable of suggesting the injurious idea that the third Ptolemaic interlocutor was meant for himself. But he would have well deserved the name of Simplicio, if he could really have believed this when he found leisure, which was probably not at first, to read the dialogues. What was however true, and scarcely less calculated to exasperate his imperious Holiness, was that Galileo had put—and could not help putting—into the mouth of Simplicio arguments which Urban had held to himself in apology for the old astronomy. Galileo had, however, carefully guarded against seeming to give those arguments as Simplicio's, but made him cite them as those of "a man of great learning and of high eminence." Personal offence there was none in such a citation; but offence to papal infallibility, and to the rules of good courtiership there certainly was, in the fact that, instead of accepting Urban's arguments as unanswerable, Galileo made his Salviati answer them. "*Hinc illa ira.*" Urban VIII. was no stiff Aristotelian. A pope who had "forced the songs and apophthegms of the Old and the New Testament into Horatian metres, the song of praise of the aged Simeon into Sapphic strophes,"* certainly was not chargeable with taking grave matters in too solemn earnest. And, it must be added, such matters, whether theological or philosophical, were those which formed the smallest portion of his mental concerns, either before or after his elevation to the papal chair. He was, while rising to power, above all an accomplished courtier and diplomatist: when he had reached its summit, he was the most imperious and unscrupulous of priestly princes. What was true he had little or no leisure to investigate: what was expedient he regarded solely from a secular point of view. Maffeo Barberini's stepping-stone to papal sovereignty had been through the court of France; his policy as pope was framed on the model of Richelieu's, and was no less cynically indifferent to Catholic interests than that of his great master. It is

* Ranke's "History of the Popes," vol. ii., p. 559.

* Ranke, "History of the Popes," vol. ii., p. 558.

impossible to credit him with any other species or semblance of zeal for the Church than that which consisted in flaunting her banners and parading her cause, while fighting his own battles. "His favorite notion," says Ranke,* "was that the States of the Church must be secured by fortifications and become formidable by their own arms." This was the man whom Galileo had hoped to interest in scientific star-gazing, and to find open to conviction on points he had once determined, not by thought, but by will.

The pope, it is said, did not immediately get a copy of the new-published "Dialogues," which had been printed in Florence by a stroke of something like Machiavellic diplomacy, after the Roman censorship had been coaxed or cajoled into an *imprimatur*. It may be doubted whether he immediately found time to read them. But he saw at once, or was made to see by those round him, an affront to his authority in the attempt, in any shape, at any further discussion of a subject, on which he considered Galileo, by his promise to Bellarmine, as having, in a manner, been bound over to keep the peace. His indignation, says M. Berti, was aroused so strongly, "that the book and its author would both have been brought without delay before the Holy Office, if the intercession of the grand duke of Tuscany, and the urgent representations of his 'orator' at Rome, had not prevailed with Urban to nominate, in the first instance, a special commission to examine and report on the book before taking further proceedings." But *le diable n'y perdait rien*. The commission, of course carefully packed, made a report soon after to his Holiness, in which it accumulated all the matters of charge that could be brought against Galileo, as well for the act of publication of the obnoxious "Dialogues," as for the manner in which the questions broached therein were handled. On receiving this report, Urban lost no time in ordering the Inquisition of Florence to intimate his Holiness's command to Galileo to appear in person not later than the month of October (the rescript was issued in September), before the commissary-general of the Holy Office in Rome.

This imperious summons struck Galileo with consternation, and was highly displeasing to the young grand duke Ferdinand, who had just succeeded Galileo's old patron Cosmo. The Venetian republic would have opposed a firm front to Rome

on such a demand; but Ferdinand was young and irresolute, and the duchess and dowager duchess had been thoroughly indoctrinated by their spiritual directors against all "vain knowledge and false philosophy." Galileo's infirm health had furnished excuse for delay in obeying the papal mandate; but that mandate was repeated in still more peremptory terms, and finally the pope sent orders to the inquisitor of Florence that, so soon as Galileo's physical condition permitted, he was to be brought *in irons* to Rome. Ferdinand wrote to him from Pisa on the 11th of January, 1633, that it had become necessary for him to obey the papal summons, but that he would place at his disposal one of the grand-ducal litters and a trustworthy guide, and would allow him to take up his residence at the Tuscan embassy in Rome. No Italian prince of that period, says Herr Gebler, would have acted otherwise. No one of them would have had the courage or independence to meet with a veto the pope's demand for the extradition of an eminent subject. Venice alone would have acted on the axiom laid down by Paul Sarpi on the sovereign power of the State, and would have asserted that power against all sacerdotal pretensions to set that of the Church over it, and to execute ecclesiastical justice on the subject of an independent dominion.

There was a sad contrast between Galileo's first and last visit to Rome—the first a triumph, the last a torture, moral if not physical. There was a sad contrast, within a much briefer period, between the countenance turned towards him by Urban on his accession, and that of the same pontiff so soon averted in implacable wrath on the first umbrage given by the philosopher to the pontiff's pride of power and of wisdom more than human.

The truth appears to be that Urban VIII., in the persistent animosity he showed against Galileo (while professing all the while to retain friendly sentiments towards him), was a good deal moved as well by the instigations of intolerant councillors as by the consciousness of having gone too far previously in the direction of tolerance. He had lavished his most ostentatious patronage on the Florentine philosopher. He had expressed his opinion that the Copernican system could not be condemned as heretical, but only as rash. And now he found the representative man of that rash system again rushing with redoubled rashness into print, substantially, though not avowedly, as its apologist.

* History of the Popes, vol. ii., p. 554.

In the mean time, those who had the pope's ear had persuaded him that its propagation was in a high degree perilous to the Church. Urban VIII., like a priestly Louis XIV., was ready at any moment to exclaim "*L'Église c'est moi!*" Ranke states that, "if it was proposed to him to take counsel of the college, he replied that he understood more than all the cardinals put together."* He had, however, precluded himself from proceeding by direct means against Galileo as an offender against the laws of the Church. He had himself conceded that the Copernican system could not be condemned as heretical. The very work, which and whose author he had now resolved to crush, had received the *imprimatur* of his own censors of the press at Rome. The only course open to him was to employ his *âmes damnées* of the Inquisition to say and do for him all that he deemed necessary to be said and done to intimidate Galileo and his Copernican sectaries into submission and silence. Accordingly, as we have seen, he summoned Galileo to appear before the Holy Office, but took care not to affix his papal signature to any of their proceedings, though he presided in person at several of their sittings. No wonder if, among the ten men selected to do this dirty work for him, three — amongst them the pope's nephew, Francesco Barberini — withheld their signatures from the sentence. That sentence, as a specimen of the *suppressio veri* and *suggestio falsi*, is perhaps unparalleled even in Roman ecclesiastical Latin. It is given *in extenso* at page 143 of M. Berti's appendix, and sums up as follows: —

Dicimus, pronunciamus, iudicamus et declaramus, te Galilæum supradictum, ob ea quæ deducta sunt in processu scripturæ, et quæ tu confessus es ut supra, te ipsum reddidisse huic Sancto Officio vehementer suspectum de hæresi, hoc est quod credideris et tenueris doctrinam falsam et contrariam Sacris ac Divinis Scripturis, Solem videlicet esse centrum orbis terræ, et eum non moveri ab Oriente ad Occidentem, et Terram moveri, nec esse centrum Mundi, et posse teneri ac defendi tanquam probabilem opinionem aliquam, postquam declarata ac definita fuerit contraria Sacra Scriptura; et consequenter te incurrisse omnes censuras et penas a Sacris Canonibus et aliis Constitutionibus generalibus et particularibus contra huiusmodi delinquentes statutas et promulgatas.

It is characteristic of inquisitorial justice in all ages, that "vehement suspicion of

heresy" is here regarded as equivalent to proof of heresy; and that Galileo, having been stated to have come under that suspicion, should be assumed to have "incurled all the censures and punishments appointed and proclaimed against such delinquents." Without dwelling on that assumption — by whom, may we ask, had the Copernican theory been declared and defined to be contrary to Holy Scripture? By the pope, speaking *ex cathedra* for the Church universal? No such thing; but by the congregation of the Inquisition — a body incompetent to declare or define anything of the sort.

It was Pope Urban throughout that urged the Inquisition to exercise its utmost rigor against Galileo. He was not more intent on seizing with the secular arms of horse, foot, and artillery the territories of his neighbors to enrich his nephews, than on stretching his spiritual authority to the utmost to frighten or coerce a defenceless philosopher into restoring the sun's motion and arresting the earth's — so far as words could do it. Much has been said, with something less than justice, about the abjectness of Galileo's abjuration. His Roman Catholic biographer, M. Henri Martin, handles the matter, in our judgment, more equitably. We make no apology for rather a long extract: —

The submissive language and attitude of Galileo before the Inquisition were enjoined upon him by his feeble protector the grand duke of Tuscany, and were likewise counselled by all his friends, of whom we have letters. Niccolini, the friendly Tuscan ambassador at Rome, relates in his correspondence with his court the prolonged and deep dejection in which Galileo was plunged, after reluctantly giving his promise to comply with these counsels. We may add that, in the submissive attitude he assumed throughout his trial, he conformed also to the counsels of the Venetian Fra Micanzio, the friend and successor of Fra Paolo Sarpi. Such was the pliability of the firmest characters in Italy of the seventeenth century.

Far from imagining with Sir Brewster that the danger for Galileo lay in submission, we must not suppose that he yielded to a vain fear. He knew how two condemned heretics had been treated at Rome, the one only thirty-two years, the other only eight years before his trial. He must have had in recollection Giordano Bruno, burned alive at Rome under Clement VIII. in 1600, and Marco Antonio de Dominis, who died in imprisonment before trial in the Castle of St. Angelo, but was condemned after death, and whose exhumed body was burned with his writings at Rome under Urban VIII., in 1624. Galileo was no heretic like Bruno, an ex-Dominican monk, who had

* History of the Popes, vol. ii., p. 556.

openly renounced Catholicism at Geneva, and had publicly taught not only the system of Copernicus and the plurality of worlds inhabited by men, but the doctrine of metempsychosis and a sort of pantheism. Galileo was not a relapsed heretic like the learned mathematician and physical philosopher Dominis, ex-Archbishop of Spalatro, and afterwards Protestant canon at Windsor, who returned to the Catholic Church, but was again accused of Protestant doctrine. Nevertheless, the sentence passed in 1633 against Galileo, without exactly giving him, as a ground of condemnation, the designation of a relapsed heretic, implied that designation in the preamble of the sentence and in the act of abjuration; so as, in effect, to stigmatize Galileo's doctrine as a heresy, declared such in 1616, and Galileo himself by consequence as a heretic, who had received a secret personal warning in 1616, had relapsed afterwards into heresy in 1632, and was now pardoned solely on condition of abjuration and penance. If Galileo had refused to abjure a doctrine thus described as heretical, he would have had to fear that the designation of relapsed and impenitent heretic would have been applied in his case as in that of Bruno, drawing like consequences after it. I am convinced, indeed, that he would not have undergone the last punishment for his pretended crime; neither Urban VIII. nor his inquisitors would have gone quite that length. But he would have been shut up for all the rest of his life, as a dangerous and incorrigible innovator, in the prisons of the Holy Office.

The illusory pardon vouchsafed by Rome to Galileo, in consideration of his not less illusory abjuration, is described in all its detail of petty and minute vexations in the several works before us, each of which is, in its own way, worth study. What Rome did to Galileo is now before the world in its minutest circumstances. Let her have full credit for what, by special grace and favor, she left undone. An infirm old man of seventy, stricken with grievous maladies, whose labors and discoveries had done honor to Italy in every realm of Europe, was neither burned at the stake, nor thrown into the dungeons of the Holy Office, nor stretched on its rack. In other respects, the sentence of condemnation passed on Galileo formed no exception to the rule again laid down in principle by the infallible head of the infallible Church in the age we live in,* and is no longer carried into execution by its secular arm, because the secular arm is no longer at Rome's disposal.

The nine years of life, which remained

for Galileo after his abjuration, were employed to good purpose in bringing out his "*Dialoghi delle Nuove Scienze*," which has been generally considered, as it was by himself, his *chef-d'œuvre*, though keeping entirely off the vexed question of his great astronomical discoveries. Watched as he was by all the eyes of papal espionage, till his own were closed in total blindness, Galileo contrived to effect the republication, in Holland and Germany, of those condemned discoveries which Rome had done her best, or worst, to suppress, but of which she only, for the moment, succeeded in robbing Italy of the full honor, though to Italy belonged the genius that made them. Galileo lived to his last hour a martyr, that is to say, an unceasing and unrelenting witness to science; and Rome may be thankful that he did not directly die her martyr. But she brought his grey hairs with sorrow to the grave, pursued him to death, and after death, with the vindictive vigilance of her inquisitorial emissaries; and only did not, because she could not arrest, while life remained, the workings of that indomitable and irrepressible intellect.

We cannot conclude without some brief notice of the two most recent transcripts of the Vatican MSS. containing the successive procedures in the case of Galileo, which have been published since the preceding pages were written. These transcripts were made in the course of last year, almost simultaneously, but without concert — apparently, indeed, without the one writer having distinct knowledge of what the other was doing — by M. Henri de l'Épinois, who was first in the field in the independent investigation of these documents, so far back as 1867, and by Herr von Gebler, to whose previous publication, entitled "*Galileo Galilei und die Römische Curie*," we have been indebted for much valuable material on the subject of our present review.

The recent history of these Vatican MSS. is curious. Early in the present century, during the French occupation of Rome under the first Napoleon, they were abstracted from the secret archives of the Vatican, and brought to Paris, where they remained (to borrow M. Berti's ultra-classic style) "for eight lustres and more" — that is to say, for nearly half a century. The French autocrat at first intended to print them, but he either changed his mind from some motive connected with the tangled web of his policy towards the holy see, or else he adopted the opinion expressed by the historian Denina, that they con-

* The foregoing observations were written before the accession of the present pope, and refer, of course, to the too notorious Encyclicals of his predecessor.

tained nothing worth printing. After the Bourbon restoration, Pius VII. commissioned the late Monsignor Marini to reclaim these MSS. as papal property; but he had to return to Rome empty-handed, and without having been even able to ascertain where the documents were deposited. Under Louis Philippe, and just after the accession of Pius IX. to the papal chair, a more skilful or more successful diplomatist, Pellegrino Rossi, who enjoyed equally the favor of the courts of Rome and of France, and whose assassination, some two years afterwards, cast so deep a stain on the ephemeral Roman republic of 1848, procured the restoration of the precious MSS. to the Vatican archives. The first use made of the restored documents in the way of publication (their publication having been promised to the French government) was made by the late Monsignor Marini, their custodian, who produced, in 1850, a little brochure, entitled, "*Galileo e l'Inquisizione Romana. Memorie storico-critiche.*" This was a piece of mere *ex-parte* pleading, composed for the purpose of showing that the Holy Office had condemned — not the Copernican doctrine — but the theological notions which Galileo had mixed up with its exposition. Such an assertion was a rare specimen of effrontery; the documents being in their falsifier's hands, and staring him in the face. If Monsignor Marini supposed that the secret archives of the Vatican would never be opened to any one more studious of the truth of history than himself, he reckoned without his host. The papal government subsequently allowed access to those archives, first to a French author, M. Henri de l'Epinois, who published at Paris, in 1867, in the "*Revue des questions historiques*," an essay entitled "*Galileo, son procès, sa condamnation, d'après des documents inédits*," secondly to M. Berti, whom Father Theiner, the learned and liberal archivist of the Vatican, allowed to consult and take copies of them. A third restorer of the text of the proceedings against Galileo is Herr von Gebler, who, like M. de l'Epinois and M. Berti, has been allowed free access to the MSS.

The three writers above cited, who have now placed before the public each his own transcript of the official records of this too famous procedure, have played the part of inquisitors over each other, in a sort of emulation of the Holy Office. M. Berti took the lead by criticising the first partial reproduction of the original documents which had been made in the earlier essay

of M. de l'Epinois. M. de l'Epinois rejoined by acknowledging and accounting for the imperfections of his own previous publication, and supplying a fresh transcript of those documents, with critical comments on the errors and inaccuracies of M. Berti's edition. And Herr von Gebler brings out a third, with corrections of both the others. One result, at least, of the researches of all three critical inspectors and copyists, who have taken so much pains to be right, and to set their rivals right where wrong, will be to render impossible the exercise of any pious frauds for the future in disguising or distorting any of the main facts of the case. As to the manner in which those facts should be regarded, modern opinion has unanimously pronounced already, and M. de l'Epinois, who, following after M. Henri Martin, labors to reconcile the fair and full exposition of the case of Galileo with the vindication of the character of his Church against the "attacks of ignorance," adduces no facts or arguments of any force to alter that opinion.

A DOUBTING HEART.

BY MISS KEARY,

AUTHOR OF "CASTLE DALY," "OLDBURY," ETC.

CHAPTER V.

A SUDDEN SMILE.

LONDON in November ought to be peopled with lovers, for there is nothing that can make a person really indifferent to the depressing effect of an atmosphere of condensed gloom, but the carrying about with him the curious exaltation of brain and happy or unhappy unrest of heart, which belong exclusively to the condition commonly called being in love. It may be agony or it may be ecstasy, but it is a specific against caring for the weather all the same. Wynyard Anstice reaped the benefit of this immunity the day after his interview with Alma, and went about his business in the fog and rain with such perfect unconsciousness of the state of the atmosphere that it was well nothing better was wasted on him. He was not exactly preoccupied, he went through his day's work just as usual, took notes of an intricate case in a law court with even greater apprehension of the bearing of the evidence than ordinarily came to him; chatted with some friends, and threw out suggestions for an article in a journal to which he and they contributed, with more than

his usual vivacity and readiness. No one who came near him had the slightest reason to complain of absence of mind in him, but they would have been very much surprised if they could have looked through the surface thoughts and words, which all matched quite well with the things they were busied about, to the under consciousness that lay beneath, and in some strange way vivified and glorified all. He would have been astonished himself, for this consciousness of Alma which accompanied him all day, wiping out the fog from the sky and filling noisy law-courts and dusty newspaper offices with a curious vividness of life and interest not naturally belonging to them, was something too airy to be put into words or even into those full-born thoughts already half-clothed with words which throng the outer courts of the mind. It made itself known through the busy hours only as a luminous presence waiting outside a secret door of the soul to be let in by-and-by, and meanwhile illuminating the whole house by the rays that streamed through the chinks and fell everywhere.

There was a little impatience, perhaps, as the day wore on, for the hour to come when the secret door might be opened, yet when at length Wynyard had parted from his last client and was on his way home, a strange reluctance to enter upon the pleasure he had been promising himself all day came over him. Through his cold, rainy walk to his chambers, he kept himself warm, not by thinking on the subject that had been keeping his heart beating to a quicker tune all day, but by planning how he would soon allow himself to begin to think about it. How, by-and-by, when he was quite alone, he would open that door in his memory and let Alma come through, and again hear her say every word she had said last night, and see for an instant the quick rain of tears veil the dearest and loveliest face in the world, and feel over again the strong pain and joy the shock of that sight had given him; yes, and find out all the meaning there was in it, and count all the good reasons for continuing to love her and to hope to win her, that might be wrung out of her kind looks, and her indifferent words, and the warm, true tears that could only have sprung from a loving woman's heart. Perhaps it was that part of the prospect which had sown the seeds of reluctance amid his eagerness; a little cold dread threatened to kill all his delight lest a second, or a third, or a thousandth going over of what had passed, should point to the conclusion that nothing new

had happened, and that Alma's looks and words and display of feeling had nothing essentially different in them from what he had seen often, and as often been disappointed in, when the immediate charm of presence had been removed by a little space of time. Never mind, last evening had at all events been a turning-point, he had resolved to hope, and his determination should remain, however little he could justify it to his reason. Had he not been experiencing all day what a difference to his daily drudging this permission to hope made? The question brought him to the door of his abode, and occupied his thoughts while he shook the wet from his umbrella and mounted two flights of stairs to the floor where his chambers lay. He was a popular man, whose friendships and acquaintances branched up and down into various grades of society, and he had had quite a fight to evade invitations that would have given him the choice of several oddly different occupations for his evening. He almost felt as if he had broken away from all his acquaintance to keep an appointment with Alma, and that when he entered his room he should find her seated in one of his two armchairs by the fire, ready to talk to him. His first glance round the place brought a startling half-realization of his fancy. The gas was burning brightly, the table was spread, with signs of some one having lately made a meal there, and the most comfortable of the armchairs was wheeled just in front of the fire, with its back to the door, so that nothing was seen of its occupant but a glimpse of a head of light hair seen above its high back. Wynyard stood staring for a minute, like a person in a dream, and then burst out laughing, while a young man leisurely picked himself up from the depths of the chair, where he had ensconced himself, and came forward, showing a face and figure that had just so much likeness to Wynyard's as would have made a stranger set him down at first sight for a younger brother.

"You expected to see me, old fellow, didn't you?" he said, holding out his hand.

"When I perceived that some one had eaten up my dinner, of course I did. The empty table was enough to make me think of you, as it used at Eton when I came in from cricket and found all my bread and butter devoured; I knew you had been there."

"Well, I had nothing else to do, and I was hungry, so when your old Mrs. Gamp looked in and began to poke about, I told her I thought she had better bring in the

dinner at once, and I'd keep it hot for you."

"Which you appear to have done admirably, in old Eton fashion."

"Not so bad; there is a bit of juicy steak and a hot potato, down by the fire, and I sent out for a second pot of porter, which you'd never have thought of doing for me."

"You would always have taken care of yourself first."

"Come, now, don't be crusty, and make a fellow out to be more selfish than he knows he is. Sit still, if you are tired, and I'll fag for you; it won't be the first time by a hundred. You shall have your dinner before you in a minute, hot, and a steak that is worth eating, I can tell you; a great deal better than anything I ever get now."

"Except when you steal it, you deeply-to-be-pitied martyr to state dinners."

"Well, sit down, I've a lot of things to tell you that you'll like to hear; but get your dinner first, and then we'll talk. I don't believe you have half such a tiring life after all as mine. You look as fresh as possible, and when I got here after hunting about after you all day, I was so done up, with the beastly weather and all, that if it had not been for the beef-steak and porter coming handy, you might have found a corpse on the hearth-rug, and had to stand a trial for conspiring with Sairey Gamp to murder your cousin. To hear of my demise, by the way, would be nuts to somebody in Eccleston Square, and lead up, in how short a time I wonder, to another wedding breakfast there?"

"I dislike that kind of nonsense," said Wynyard, so sharply that Lord Anstice, who was lifting the hot dish from before the fire, put it down again with a clatter, to shrug his shoulders.

"So bad as that, is it?" he exclaimed. "Well, I am warned; I won't approach that topic again, unless with a face a yard long; but there now, eat; and if that steak don't put you into a good enough humor to talk about anything, I should say your case was a very serious one, indeed."

While Wynyard eat his dinner, his companion half turned his chair from the fire, and with his legs thrown commodiously over one arm, sat sideways watching him with a lazy, good-humored sort of interest in the meal, such as a child shows who finds relief from the trouble of entertaining himself by watching his elders, and feels rather honored in being allowed to do so.

The likeness between the cousins, though most apparent at first sight, remained strong, even in the opinion of those friends who knew every change of the two countenances. In fact, the constant pleasant variety of expression was the point their faces had most markedly in common, and it required a careful student of face-lore to detect the different qualities of the smiles and quick looks of intelligence and sudden glooms of annoyance or pain that made each countenance like an open landscape on a day of cloud and sunshine. A changeful show, very agreeable to look upon. It was easier to see that the younger face was the handsomer of the two, being in fact singularly handsome, and to overlook that what it gained in symmetry of feature, it lost in moral strength and intellectual power. Just at that moment the look of listless discontent which usually lurked about the well-shaped mouth and drooping, thick-fringed eyelids was absent, but the tone of voice in which the younger man's next remark was made, showed an approaching relapse into the prevailing mood.

"I should say you lead a very jolly sort of life here by yourself, with very little to trouble or bother you."

"Except my work," answered Wynyard drily, "which, if I remember right, you considered something of a trouble when you attempted it."

"Attempted it, precisely; but then I never did it; I never got any work to do, and I could not have done it if I had. I was not saying that I should lead a jolly sort of life here, but that you do."

"Never mind me; let me alone. How about yourself? I have hardly seen you since you were last at Leigh. What made you come back so suddenly? was your mother there? or what happened? Let us turn to the fire; I have nothing very particular to do this evening, so you can talk as much as you like."

"Good heavens, may I? What a gracious permission! I ought to be hugely obliged to you for condescending to listen to me."

Wynyard partly thought he was right there, but he only said, "I thought you intended to stay at Leigh till after Christmas."

"Intended! no; you said I ought; but I never intended anything but to be governed by circumstances, as I always am. You were right just now about my mother being there; she was there, with all her friends."

"Well, I suppose you consider the

house your mother's home as much as yours?"

"'Ministers to make one die,' that was a capital speech of Florac's in 'The New-comes;' it made more impression on me than anything else in the book. Puts all my life experiences into a nut shell. They were all there, every one of them, men and women."

"If you were oftener at home, your mother would take more pains to suit her society to your taste, I should think. When you leave her alone of course she gets her old friends about her."

"Come, now, Wynyard, did she ever think of my tastes in her life, except to try to crush them out as if they were serpents? Does she not consider it her first duty in life to bully me, and would not ploughshares strewn in the way keep her from it? You know you never could stand her for more than ten days in the old times. After the first week or so of the holidays you used to sneak off to the Riverses' or somewhere, and leave me to bear the brunt of the lecturing alone."

"She was not my mother," said Wynyard quickly. "However, what are we talking about? You don't wish me to condole with you on your mother's temper, I suppose. She is about the only relation you have in the world, except myself; and she did the best she could for you when you were dependent on her."

"And now that she is dependent on me you fancy, I suppose, that I find it easier to get on."

"No," said Wynyard, with the first pleasant smile that had crossed his face since the talk began. "I know you both too well to fancy any such thing. I am certain that her conscience does not allow her to abate her vigilance over your shortcomings by a hair's breadth because she is now owing everything to you; and, as for you, I won't say what quality it is in you that makes you a greater sneak than ever under the circumstances, but I am prepared to give up all hope of ever seeing you stand up to her as you ought, now that you have a house of your own, which you could turn her out of if you pleased."

"Then you ought to leave off bullying me when I turn myself out of the house; you know it's hammer and tongs when we are there together, and that I always hated it. When I think of the old Eton holidays in that awful little house in Chelsea, and the state I used to be in at the end of them, I wonder I am alive now. It's only natural I should want a

year or two of peace and quiet to shake myself together again. Why should you object?"

"I don't object; I only say the sort of aimless life you are leading now is very bad for you, and it's for you to consider whether you ain't getting sick of it."

"What's the good of considering? I don't see anything else to be done — unless — yes, I had a scheme in my head, but for that you must help me, and though it's for your own good as well as mine, I declare I don't know how to put it to you."

"I don't advise you to bring me into any of your plans; it would not answer. You've got to learn to look after yourself, and if you can't why should not you marry?"

"That's the worst piece of advice you ever gave me. It would be a beastly selfish, and a monstrously silly thing to do. If I chose a wife to please myself and brought her home, there would be two people instead of one for my mother to bully; and if I let my mother choose for me one of her sort, there would be two people instead of one to bully me. It's out of the question. I want peace and quiet and something to amuse me, and you suggest getting married! I ain't so hard-hearted as all that. Fancy bringing a little frightened thing like the bride I saw yesterday to Leigh for my mother to sit upon."

"There are plenty of girls as lovely and timid-looking as that one, who would be quite ready and thankful to attempt the adventure if you put it to them, I fancy," said Wynyard, rather bitterly. "By all accounts, Lady Forest has not been wanting in courage."

"Ah! but there it's the man himself that has the temper, or drinks, or something, is it not? and that's nothing — nothing to a nagging mother-in-law. A woman can always get the whip-hand of a man if she likes, and all the better for beginning by seeming afraid of him. So they say at least, I don't know. No mortal being ever even pretended to be afraid of me. I'm not made for ruling, I suppose. It is a dreadful mistake, that you are not in my place, Wynyard, and that brings me to what I came here to talk about. I have been thinking of it ever since yesterday."

"I should have thought that was too old a story to be talked or thought about now, and, for myself, I don't see the use of it."

"You will by-and-by, when I have got

what I came to say right side up in my head, and can put it properly to you."

There was a little pause, during which Wynyard took out his note-book, and began to study it; and Lord Anstice folded and unfolded a stray sheet of foolscap into various shapes, with great appearance of interest. After finally producing a cocked hat, and sticking it on to a bust of Dante on the chimney-piece, he resumed, in a meditative tone, —

"No, I can't understand her passing for a beauty. She looked well yesterday, extremely well; but I never could get over her nose. A woman with a nose like that has always too much to say for herself. I suppose you don't mind it, eh?"

Wynyard, who had now taken up a pencil, proceeded to re-write an obscure note, with an expression of face which he intended to make utterly indifferent and pre-occupied, but he could not prevent his features from quivering a little.

"Why don't you answer a fellow?"

"I don't know what you are talking about."

"Oh yes, you do. I was asking you whether you did not think Miss Rivers about as equal a match to my mother as one could expect to meet with in this generation. Those delicate aquiline noses and bright blue eyes, with a spice of devil in them, mean temper, don't they? and plenty to say for yourself. Altogether, a person who would not consent to be sat upon easily, eh?"

Wynyard returned his note-book and pencil to his pocket, and sprang up from his chair.

"I'm going out," he began; "if you've exhausted all you have to say to me, and have nothing better to do than discuss Miss Rivers's nose, which is no business of yours or mine, let me remark, I shall leave you. I have just come across the address of an old fellow, whose acquaintance I made accidentally at a public meeting, and whom I promised to look up some day. I've a fancy to find him out to-night."

"That's to say, that any old fellow is better worth listening to than your own cousin, though he has come out on a wretched evening to talk to you about your own affairs."

"I have not heard anything about them yet; but you can come with me if you like."

"I'm coming, of course; I like your oddities, and when I've got you out in the streets, you won't be able to get away from me till I've had my say out."

"That depends," Wynyard observed, when they were out in the air, and walking down the wet street arm-in-arm. "I may as well tell you at once, that I'm not in a humor to-night for chaff on the subject you introduced just now. Anything else you please; I don't want to be crusty, but that is tabooed now and forever, unless you wish really to annoy me."

"There is nothing I mean less. It was not chaff either I was beginning upon. I had a handful of good wheat to show you, if you'd only have looked at it. Now, I suppose, I shall have to come round you with the halter some other way."

"If you really have anything to say, say it out. It can't possibly concern Miss Rivers."

"But it does. However, I've turned round now, and am beginning at the other end. What should you say to my cutting Leigh for a few years, and setting forth on my own hook, without letting any one know precisely where I was going, and without knowing any better myself? A life of travel and adventure is positively the only sort of life I care a rap for; and why should not I have it? I should take plenty of money with me, and while it lasted, live about as I please in out-of-the-way places — Timbuctoo, perhaps — without any of my people being a bit the wiser; and when I come back, say in ten or fourteen years, who knows, I might be ready to settle down and marry the woman my mother has in her eye for me already, and make up to her for all the years wherein I have plagued her, by walking in her ways for the rest of my life. You may not credit it, but I have such a praise-worthy ending always in view, and nothing will bring me to it but a long spell of freedom first. What do you say to it?"

"Say! there's nothing to be said, but that it's as foolish and selfish a plan as you could possibly propose to yourself. You know perfectly well that your mother would be miserable, and that you've no right to throw responsibilities on her, that she's even more unfit to deal with than you are yourself. You don't expect me to further such a project, I hope?"

"Wait a bit before you begin to swear at me. Just suppose for an instant or two that I am dead."

"What's the use of that?"

"You'll see — say I'm dead, and that you immediately marry Miss Rivers, what would happen next? You would not, I take it, turn my mother out of Leigh, since she has taken to the place; or stop her from carrying out her favorite plans in

the village, seeing that they are about all she cares for in life at present. She would be dependent on you instead of on me, and your wife would manage her. That's the point. The thing opened out to me as I sat looking at Miss Rivers's profile the day before yesterday, and I've been thinking about it ever since."

"You don't mean to drown yourself on the uncertain prospect of getting Miss Rivers to manage your mother, I suppose?"

"Not at all. I go away for a few years, leaving the entire management of my affairs in your hands. You have sufficient clue to my whereabouts to send me money; but you decline to give such information to my mother, or any of her allies, as would set them on following and remonstrating with me. It's an understood thing among all parties that my eventual return, and my future conformability, depend on my taking a long spell of let-alone first; and meanwhile you marry Miss Rivers, and do pretty much what you like at Leigh. You might try on any of your pet social schemes you pleased on the estate for what I should care. Shut up all the ale-houses, or give all the women votes if you can. I'd promise not to undo more than I could help, when I got home again. How do you think it would work?"

"Like a good many of your plans, agreeably enough, perhaps, for yourself, and very badly for everybody else concerned. What makes you suppose that I should be willing to give up my profession, and all my prospects in life, to do your work while you enjoyed yourself?"

"Well, I could tell you in a word why you should, if you will let me. Miss——"

"No, don't go on," interrupted Wynyard hastily. "It's absurd. If I can't put myself in a position to win the wife I want by following my own line, I certainly shall not do it by becoming a paid servant of yours. You misunderstand the matter altogether."

"But don't be crusty. Servant is a notion of your own. Of course, I meant a sort of partnership, of which you should settle the terms yourself, and that could go on all the same after I came back again to England. Leigh is large enough for a colony of us, and dull enough to want plenty of inhabitants to make it bearable."

"Thank you—you mean well, I dare say; but plans of that kind never answer, and I am the last person——"

"You ought to be the first person, if you put the smallest atom of faith in your own theories. I've heard you talk by the

hour as if all private property was a mistake, and everybody who has anything ought always to be giving it away to everybody else, and doing everybody's work as well as his own; and now when a chance comes of carrying out your doctrine, and a fellow asks you to take the work he can't do himself off his shoulders, and go shares with all that he has, you say, 'It won't answer,' as coolly as if you had never preached it up as the right thing."

"Don't push me against the lamp-post in your vehemence. Look where you are going—you will have your umbrella hooked on to that woman's bonnet in a minute."

The woman was Katharine Moore; and as Wynyard pulled his companion further on to the pavement, and slackened his pace to lower the obstructive umbrella, the sisters, talking eagerly, passed him closely on the lamp side, and Christabel's remark about the pleasantness of a London fog, and her upward glance at the light, arrested the attention of the two young men at the same moment. They did not speak, but they exchanged glances, first of amusement, than of surprise, when the face whose sudden beauty the lamp-light had revealed, had been swallowed up again in the murky gloom of the street.

"Queer things one hears in the streets sometimes," said Lord Anstice meditatively, after they had proceeded a step or two on their way. "I wonder what the girl meant by saying that London mud was sweet. I wish I could see her again and ask her. She looked as if she meant something more than met the ear, and I sha'n't get her saying out of my head in a hurry; it was such a queer thing to hear in the street on a foggy day. Hallo! What's that?"

"Not a queer thing to hear in these streets," said Wynyard; "some drunken row probably before the gin-shop at the corner. Here is our turning."

"But the girl who passed us just now went that way. I saw her pressing on as if she had business down there. Let's follow at all events to see what's up."

Wynyard, who had had a good deal of previous experience of the general infutility of interference in street rows, did not second his companion's desire to push on with the same eagerness that Katharine and Christabel had displayed. Consequently the two young men did not reach the scene of action till a few minutes after the appearance of the sisters there, and as a rough crowd had now poured out of the gin-shop near, they had

some difficulty in forcing their way through to what seemed the core of interest—a clear space, close to the railway-arch, where four figures, disengaged from the throng, were standing out conspicuously; a woman leaning against the brick-work of the arch, wiping some blood from her face with the corner of a ragged shawl, and a man, who seemed lately to have turned from her towards two other women standing before him, one of whom had her hand on his arm. His face, on which such light as there was fell, wore an uncertain look, half-bewildered, half-savage, as of a person arrested in a moment of fierce passion, and held irresolute by some strange, new experience, which had not as yet translated itself into his consciousness as cause for putting aside or inflaming his rage. The woman who was touching him, and on whose face his strained, blood-shot eyes were fixed, was still speaking, for a clear, refined voice was audible a few paces off through the hubbub of the crowd; but just as the two young men gained the outer circle of spectators, some one in the throng laughed—a shrill, jeering, woman's laugh. At the sound the arrested madness in the ruffian's face lighted up again like a jet of fire bursting forth, and as the evil flame leaped from his eyes, there came the dull sound of a heavy blow followed by a fall, and then a shrill, wailing cry rang through the street. Two minutes of indescribable confusion and backward and forward surging of the crowd followed; but at the end Wynyard and his cousin had each accomplished the object they had respectively thrown themselves upon when the sound of that cowardly blow fired their pulses. Wynyard, aided by a wiry little old man who had elbowed his way to the front at the same moment with himself, had pinioned the offender against the wall of the bridge, and was holding him firmly there till the proper authorities, who were said to be making their appearance round the corner of the street, should arrive to take him into custody; and Lord Anstice had succeeded, he never quite knew how, in dragging up from under the feet of stupid stagers and gesticulators the woman he had seen felled to the ground, and in carrying her out of the throng of people, intent on watching Wynyard's prowess, to a spot just beyond the shadow of the railway-arch, where a coffee-stall with its lamp and awning seemed to offer a sort of shelter. Two or three women followed him, and almost the first thing of which he was distinctly aware was the

touch of a cold, trembling hand laid on his, and a voice, hoarse but imperious, saying in his ear,—

"Give her to me—here, into my arms. She is my sister."

"Can you hold her? She has fainted," he said, looking down into a small, white, agonized face in which he did not at the moment recognize the flashing-eyed, smiling countenance he had noticed under the lamp a few minutes before.

"Of course I can, she is my sister, I tell you. She will open her eyes when she feels me. Oh, Kitty! Kitty!"

A woman pushed the coffee-seller's chair forward and drew Christabel into it; and then Lord Anstice knelt down on the pavement, utterly regardless of wet and bystanders, and laid his burden across her knees. Neither he nor Christabel had presence of mind to think of any other course to take than this. They were both absorbed in one question, so dreadful to Christabel that it might not have suggested itself to her if she had not read it in his eyes. What was the meaning of the deathlike whiteness of the face, which fell prone on Christabel's shoulder as soon as Lord Anstice's supporting arm was withdrawn? Before he rose from his knees he had time to take in a good many particulars connected with the white face and drooping head, from which the bonnet, crushed into a shapeless mass, had fallen. Its high, white brows, one of which was disfigured by a wound; the soft, dusky hair brushed smoothly back from the face; the delicate ears; the sweeping black eyelashes and level eyebrows; and he thought what a strange face it was to have grown deathlike in a street row, and how still more incongruous with the surrounding scene—the flaring light of the coffee-seller's lamp and the flaunting and wretched figures gathered round—was the clear-cut, cameo-like head that bent over it; the features as pallid and almost as motionless, but instinct with living agony instead of unconscious peace. He had time for these thoughts before any change came, and then there was a quivering of the white eyelids, a swelling of the nostrils, a moan from the recumbent head, and at the same moment the other face flushed up, and two earnest eyes, with a strange look of triumph in them, were lifted to his.

"There, you see, I said she would wake up as soon as she felt my arms round her; I knew she would come back to me. Katharine, Katharine, my darling, I am holding you fast!"

Another long-drawn sigh, and then the dark-fringed lids were fairly raised, and the eyes turned to the face above them with something of an answering look of love; and Lord Anstice, as he sprang to his feet ready for helpful action now that suspense was over, felt a curious pulse in his throat, and a quick bound of joyful relief in his heart, such as nothing that had occurred to himself for many a day had been able to give him. It was, to use his own phraseology, the "oddest" feeling he had known for a long time, and he quite applauded himself for being capable of such strong emotion. By this time Wynyard and his coadjutor had resigned their captive into the hands of the police, and they now joined the smaller group by the coffee-stall. The shabby old man, who, to Lord Anstice's secret disgust, recognized Christabel, and called her "my dear," immediately took the lead in deciding what was to be done.

"These ladies are friends of mine," he explained to Wynyard, "and were coming to my house when the accident occurred. It is a few yards further down the main road, in a side street: we had better get them there as quickly as we can, out of the way of the crowd that will soon be surging back to the gin-shop."

Katharine, who was now sufficiently recovered to take part in the discussion, caught at this suggestion and managed to drag herself from Christabel's arms and put her feet to the ground; but the first effort to move brought a moan of pain, and though she assured Christabel that she believed no bones were broken, she was obliged to let herself be supported along by the arms of the numerous helpers who came forward, and was at last fairly carried into the little shop. The jar of the last step across the threshold, and of being laid down on the hard sofa in the back parlor among the clocks, cost her another fainting-fit longer than the first, and while Christabel was occupied in applying restoratives, there was time for a few words of explanation to pass between the owner of the house and the two young men, whom alone of the crowd he had allowed to pass beyond the shop door. As soon as he began to talk quietly, Wynyard recognized his acquaintance of the public meeting in the little old man, and he did not feel the less inclined to put him down as a social phenomenon for hearing him speak of Christabel as his teacher, and seeing her take out from under her shawl a volume of Pascal, which was to have been the subject of their evening's study.

Surely there must be a spirit of travesty abroad to-night, and his long day's suppressed excitement had carried him into some region of illusion, where perhaps there was nothing incongruous in wiry old shopkeepers being the pupils of pale young ladies, or in women with grand, pure faces like that one on the sofa being knocked down by drunken ruffians in street rows. It did not increase, but rather lessened his bewilderment, when Christabel, in answer to his question, gave the name of the street and the number of the house where they lived, and he remembered all at once that it was Mrs. West's address, and recalled Lady Rivers's embarrassed explanation about the two young ladies whom her sister, Mrs. West, had taken into her house as companions for her daughter, that pretty shy little Emmie West, whom he had met in Alma's company once or twice during the course of the last year. This information seemed rather the *mot de l'énigme*, so far as accounting for his own share in the events of the evening went, for now he knew why it was, that, failing the quiet reverie he had promised himself, a stroll in the direction of Saville Street had appeared the next most agreeable thing to do. It brought him not near the rose indeed, but near the earth that sometimes touched the rose.

All through this evening's walk there had been lying at the bottom of his mind a plan of turning towards Saville Street, when his visit to the watchmaker was over, and (if his courage held good at the last moment) of paying a late call on Mrs. West, and finding an excuse for drawing Emmie into talk about the wedding that would include one speaking and one hearing of Alma's name at least. The project was at all events so fixed in his mind, that when Dr. Urquhart had been summoned, and had decided that Miss Moore must be conveyed home, and put to bed before anything could be done to relieve her, it seemed quite a matter of necessity that he should follow and see the end of the adventure. He did not even feel surprised at the energy with which his cousin scouted Dr. Urquhart's demur to the necessity of so many attendants accompanying his patient to her own door. He was glad to be upheld, by a perfectly indifferent person in his opinion, that something would arise as soon as they all reached Saville Street to make the household there glad of the presence of two willing messengers, who might be sent anywhere that occasion required.

As it turned out Wynyard's presence

really was a boon to Emmie and Mrs. West, for they found him sufficiently quick of comprehension to be used as a decoy for the purpose of drawing Mr. West's attention from the unusual bustle and confusion in the lodgers' part of the house. He allowed himself to be hastily sent into the dining-room, while Katharine's transfer from the carriage, through the hall, was being effected, and honestly taxed his conversational powers to the utmost, and kept Mr. West so well entertained that he quite forgot to harass the rest of the family by complaints and questions. After more than an hour's hard work, Wynyard had his reward. Mrs. West and Emmie came back to the room, and, after a little talk over the accident, he found an opportunity for telling them that he had been present at Lady Forest's wedding the day before. The remark started the sort of conversation he desired, talk that was always more or less hovering round Alma, and which at last brought out an expression of Mrs. West's preference for Alma over her sisters, and the relation of various anecdotes of Alma's kindness to her Saville Street cousins. Wynyard (despising himself for his folly all the time) thought that the interest of these little stories, totally irrelevant to him and his concerns as they were, well repaid him for the hour and a half he had spent in waiting for the chance of some such treat. He knew that they did not concern him in the least, and ought not to alter his thoughts in any way, for he believed that he understood Alma's character better than any one else did. Yet as he sat and listened, while the foolish little anecdotes fell in diffuse sentences from Mrs. West's lips, he could not help receiving them into his mind as a brightly-colored, hazy background, prepared for him to begin painting hopeful pictures upon as soon as he should be alone at last. Emmie, seated on the edge of the sofa, and putting in a word now and again, entered into his thoughts only as a pretty incident in a scene that would always live in his thoughts with a certain pleasurable glow upon it. He had been so well amused himself that it did not occur to him to feel surprised at the sight of his cousin still lingering in the hall, when at last unmistakable signs of weariness in the master of the house had driven him to take leave.

"What did you find to do? and where have you put yourself these two hours?" he asked, when they were on their way home, and had settled preliminaries about meeting next day to offer their evidence of the assault they had witnessed.

Lord Anstice launched into a description of the Moores' rooms, to which he had been invited by one of the children, under an idea that he was the attendant of the surgeon whom Dr. Urquhart had summoned to his assistance. He made a long and amusing story out of his encounters with different members of the crowded Saville Street household, not omitting to describe Emmie's shy beauty and old Mrs. Urquhart's wonderful evening cap; but he said very little about the real heroines of the evening, and nothing at all concerning a few words of conversation between himself and Christabel, which, though he might not perhaps have confessed it even to himself, had repaid him for a good deal of unusual self-denial.

The opportunity for talk had fallen out in this way. He was standing where he had been left by Casabianca, in a corner of the Moores' sitting-room, partly hidden by Christabel's easel, while the two medical men talked together by the fireplace, when Christabel came out from an inner room in which Katharine was, and walking straight up to him, touched him on the arm.

"My sister wishes to speak to you before you leave the house."

"Is she able?"

"She will not sleep till her wish is satisfied—follow me before we are forbidden," with a glance at Dr. Urquhart and a movement towards the bedroom, which he followed. Katharine was lying on a low bed, that fitted into a slope in the attic roof, pale, but with full consciousness and energy in the grey eyes she turned on him.

"I want to ask one question before I sleep," she said, in a weak, sweet voice. "You were there?—you saw it all, did you not?—you are —"

"Ralph Anstice," he said, seeing that she paused and looked earnestly at him.

"I was wondering whether it was you whom I saw in the crowd. You came first to our help—I think you must have seen —"

"The blow that struck you down. I did, and you may be quite sure that the ruffian who dealt it shall get his deserts as far as I can accomplish it."

"Hush! I was not thinking of him. I want to know what became of the woman whom he had struck before I came up. Did no one think about her? Did no one notice what became of her?"

"I can't say that I did. She followed the crowd, I suppose."

"But she seemed much hurt; she is a

woman, you see, as well as I, and much more helpless."

"At all events she shall be free from her tyrant for a pretty long time to come. I think I may safely promise you that."

"But it may not be enough; it may not even be the best thing for her, if the man is her husband. I want you to understand that I interfered for her protection, and it is her good, not any foolish indignation on my account, that I want all of you who saw what happened to bear in mind if you are called upon to give evidence to-morrow. Do not make what happened to me the important point. I brought it on myself, and I shall feel guilty if things are made worse for that miserable woman on my account. I can trust David Macvie, and you—may I not?—to consider her welfare first, and not press the charge on my behalf, if prolonged punishment of the man would be bad for her?"

There was a moment's silence, while Lord Anstice hesitated in some embarrassment at the request; and Christabel, who had gone round to the other side of the bed, and was bending over Katharine, looked up at him.

"You had better do as my sister bids you," she said. "She is always right, I can assure you, and the sort of person to be obeyed."

As she spoke a sudden smile broke just for an instant over her face, bringing color and light and sweetness upon it, and a look into the wonderful wide blue eyes that made them seem to his fancy like gateways, giving a glimpse into a new world, where such feelings as ennui, and weariness, and unprofitableness had no existence. In that moment he recognized the face to be the same as the one that had flashed upon him in the street and struck him so much by its strange beauty. When he had left Wynyard at his door, and was proceeding on his solitary way to his own quarters, he occupied himself in wondering how one small pale face could wear such opposite looks, and which of those he knew he should find upon it when he came to Saville Street again, as of course he must, to render an account of how he had kept his promise.

CHAPTER VI.

PROS AND CONS.

"So you saw Agatha when you were in Paris, and never wrote me word. How was that, Constance?"

"Speak lower, dear Alma, my maid is in the next room putting away all my bridal dresses, and the door is open."

And young Lady Forest, the bride of six weeks ago, looking very unbridelike in the deep mourning she had lately put on for her mother-in-law, whose sudden death had cut short the wedding journey, looked timidly towards a figure dimly seen through the open dressing-room door and then appealingly at Alma.

"Now, Constance, I hope you are not going to set up a fear of your servants in addition to all your other little terrors," said Alma. "I did look, at all events, to seeing some dignity and independence come with the consciousness of your wedding ring. Do you ever mean to feel as if you were mistress of this house, I wonder?"

Constance answered by another frightened "Hush!" and Alma, after crossing the room and closing the door, knelt down by her sister's chair, and put her arms round her.

"Now we are thoroughly alone at last," she said coaxingly. "I see it won't often be so. Let us *feel* alone this once, and speak one or two free words to each other once more in our lives. I have scolded mamma for wanting to make you talk, and here I am doing it myself; but I am so hungry for a little bit of your real self, Connie. We have not talked together in our old way since the day, three months ago now, when you came into my room and said, 'I am engaged to Sir John Forest.' I was naughty, and you were frightened, and a thin ice wall grew up between us. It has passed away now, has it not? and you will at least let me look into your eyes, if you can't speak to me, and I shall read there how it is with you, now that you have six weeks' experience of what it is to be married."

"Of course since Lady Forest's death it is all very sad, so different from what we expected," Constance answered, still avoiding her sister's gaze.

"Yes; but that need not keep you from looking at me. The suddenness was very shocking, and it must have been sad for you both, hurrying home to find that all was over. But now that it is all over let us speak the truth to each other about it. Lady Forest was a very formal person, whom neither you nor I could get on with, and—I suppose it was very hard-hearted of me—but my first thought, when I heard she was dead, was that now there was one person less for you to be afraid of."

"I had been making up my mind not to be afraid of her, but to try to get her to like me. I thought she might be a

help to me; show me how to manage; give me hints when I felt at a loss as I do sometimes."

"I should have been frightfully jealous in that case. Yes, indeed, I don't mean to give you up to any one. You will have to confide in me still in the old school-room fashion. I will not allow that the mere fact of your being married has put such a gulf between us that we cannot be as useful to each other as we used to be. Now I challenge you to look me full in the face and say that you can do without me, and that you don't, just now, long to talk to me without any false pretences."

At last Lady Forest did lift her drooping eyelids far enough to give Alma a good look into her lovely eyes.

"You don't want me to say whether I am happy or not, do you?" she asked, with a visible shrinking from the question. "You know it is very difficult, while everything is still so strange to know exactly how it is with one; but (lowering her voice to a still softer whisper) I don't mind telling you, if this is what you want to know, that *he* is really very fond of me, in his way, he is indeed, Alma."

"What a singular *he*!" cried Alma lightly, to conceal the pain the earnest look she had courted had given her.

"But, my dear child, do you always call Sir John *he* in that awe-struck tone? Does he by chance belong to a tribe of savages I read of the other day, where a wife is not allowed, on pain of death, to speak her husband's name? It is considered a sort of sacrilege, I believe, among them for a woman even to think of the man she belongs to by any other designation than master. Has he brought you to that faith already?"

"I wish you would not joke about it."

"Is it really so dreadful, then? Nay, you must give me another look; you must not send me away from our private interview with such very fearful ideas of your present condition. Remember you are the first of us three sisters who has made the desperate plunge, and if you report badly of the new country, how am I ever to get across?"

"Oh, Alma, indeed I have not said anything; I am quite content and convinced that I have done the right thing. Fears don't go away and say or think that—in fact—that I don't feel as all girls do when they are first married, unless they have been merely silly and selfish, as mamma calls it, and chosen to please their own fancies. I did my duty, and I feel sure

that I shall be more and more satisfied with everything around me as time goes on."

"We'll get to the *thing* part of it when mamma is here; while this precious hour to ourselves lasts, let us cast one more glance at the *he*, to satisfy my devouring anxiety. You are not going to be very much afraid of your husband, are you, you little coward? You say he is fond of you, and you used to know, with all your softness, how to weave a very pretty little tyranny out of your fears for any one who cared enough about you to submit to it. The *caring* is the great point with you—is not it?—not so much *who cares*. Having got that, you will do very well, I should think, and grow happy and at ease with your husband. Shall you not?"

There was a pause, and then Constance said slowly,—

"There are different ways of caring. A person may care for you to look and be exactly what *he* wishes every minute of the day. That may be all his pleasure in you. He may not be able to have an idea that you ever want to be or do anything for yourself. It is pleasant to be of so much consequence, but it is anxious work. One always has to be watching oneself, and trifles grow to be so terribly important."

"Yes, I see. In marriage it ought to be one thing or the other. If the two are not *really* one, they had better be two. The artificial way you are trying, where on one side it is all acting, must make a dreadful burden of the life."

"But one shall get used to it in time," said Constance, more cheerfully. "One may get to know so well what is expected of one in every little thing as never to make mistakes. That was why I began to reckon a great deal on seeing poor old Lady Forest again. She had lived with him all his life, and must thoroughly have known all his little ways."

"Little ways!" Alma burst out. "Fads, I suppose, about the shape of your boots, and the set of your shawl, and the phrases in which you speak of the weather. Oh, Constance! to be anxious about such matters as that all one's life must indeed be a burden. Forgive me, dear! You know my way; I speak impetuously, and then it is over, and I am prudent forever afterwards. I promise never to try to make you discontented again."

A shade of pained displeasure had come into Lady Forest's face; and Alma, feeling that her outburst had closed the gates of confidence, for that hour at least, hastened penitently to turn the conversation

to more commonplace matters, where she should not be tempted to offend again.

"I can't help being glad," she said, "in spite of your regrets for old Lady Forest, that you will begin your reign in this house as sole mistress. You will be able to carry out your own plans and tastes; and how mamma will enjoy helping you to remodel the antiquated furniture, and make the place homelike for yourself! Everybody allows that her judgment is good in such things, and I know you will enjoy giving her the pleasure of thinking she is helping you."

"Don't put such a notion into mamma's head, Alma, it would cause me dreadful trouble. Sir John hates changes, and I am afraid, more than anything else, hates mamma's taste. We must never let her know this; but he calls it, and some other things that you and I have been taught to believe in, vulgar. I hardly like to say it, but it's true, and he does not mind letting me know now what he thinks of us all. You can't imagine the relief it is to me to put away my *trousseau*, and remember that when our mourning is over, I can get fresh clothes from people he approves, whose taste he won't question on every point."

"All your pretty things that we chose together, and that poor mamma fussed over to such an extent; are you actually burying them all?"

The tears rushed to Lady Forest's eyes, and she turned her head away to hide them as she answered,—

"You don't know how tiresome it was to be told half-a-dozen times every day, that there was something a little wrong in what I had on. I see you think I ought to have stood up for mamma's taste and yours, but it is very difficult to go on forever answering the same sort of objections to every trifle about one — over and over again."

"I should think so, indeed. But I can't help feeling sorry that all the little links between Constance Rivers and Constance Forest are put away so quickly. You might as well have been Marie Antoinette, changing all her clothes, down to her stockings, before she was allowed to cross the frontier into her husband's kingdom. She got the upper hand over her lout of a king, let us remember, in the long run, and I don't despair of seeing even you pluck up courage to reign over the kingdom you have come into possession of some day. It wants a great deal of reforming I can see at a glance, stately as the general effect is. I shall begin to

respect you when you have succeeded in making those dismal state rooms habitable. Do you remember how chilly we felt in them, on the memorable occasion of old Lady Forest's one ball; and how I longed to rummage among the *potpourri* vases, and the China dragons and monster jars. Shall you ever dare to move them to see what secret cupboard doors there may be behind them, Lady Bluebeard?"

Constance could not help smiling, though she colored a little as she answered,—

"I will confess something that will amuse you; but you must not talk about it to me again before any one. I went into the great drawing-room yesterday, when Sir John was out, and to prevent myself from thinking too much of that ball, and all it led up to — which you know I only half expected at the time — I began to take some of the old chintz covers off the worked chairs, and to look into the cabinets and drag out all sorts of wonderful old treasures. I would not have the servants in to help, for fear they should take me for an inquisitive schoolgirl; and as I went on I got excited over my work, though with a guilty feeling all the time, as if old Lady Forest might suddenly open the door of a cabinet behind me, and ask me what I was doing with her ancient worked chairs, and her beloved priceless china. I forgot all about Sir John, till I heard the folding doors of the ante-room open (about half a mile from where I happened to be kneeling, with my spoils all about me), and saw in the distance the figure of a gentleman coming through. It was quite too dark for me to make out who it was at first, and I can tell you that my heart did beat quickly, and I felt a very coward till the intruder got near enough for me to see that it was no tiny husband, only Wynyard Anstice come to inquire after us, and shown in by mistake. He looked so like old times — old holiday times with the boys — that I could not help letting him see how relieved I was that it was only he, and when lights were brought I showed him what I had been doing and we had a good laugh over my fright. Oh, Alma! such a laugh as I had not had for two whole months. Then we set to work to put things straight again, and we worked as hard together as if we had been tidying the old schoolroom, after a sham fight on a holiday afternoon; and just as Wynyard was lifting the last china monster back to its old place on a shelf over my head, the door opened again, and that time it was to let in Sir John."

"And you told him what you had been doing?"

"Alma! He would never have thought me sane again as long as he lived. If you had been with us for the last six weeks you would know better than to expect such candor from me. I might almost as well have got myself unmarried, for he would never have taken in the idea that Lady Forest could so conduct herself. Wynyard Anstice understood the state of the case much better than you do. He turned away from his vase, as if he had strolled up to it casually to look at it nearer, and kept Sir John in conversation cleverly till I had recovered my countenance, and was ready to take my share in the talk."

"Oh, Connie, I know just the sort of imploring look you darted at him from under your eyelashes to make him do that. How you can call yourself a shy person and yet bear to make such revelations in sudden moments, I never could understand."

"It did not tell Wynyard Anstice anything new. It was a bit out of old times for him. As he sat talking to Sir John, I knew, for I read it in his face, that he was thinking to himself how characteristic all this was of the cowardly little Constance, whom he and Alma always used to scramble out of her scrapes. My imploring look did not reveal anything fresh about me to him."

"Except that you are afraid of your husband; and oh, Connie! I am afraid you would have done just the same, if young Laurance, or any of your old lovers had come in."

"I did not show that I am afraid of my husband, only that I respect him, as I have always respected the proper authorities. I have not been troubling myself at all about that part of yesterday's little adventure. I really did not see that I had done anything foolish so far."

"What else have you to confess? Did you give Sir John to understand by your manner that we are still on our old terms of intimacy with Mr. Anstice? or did you stiffen back into the coldness mamma has prescribed of late, after Sir John came in?"

"That is the confession I have to make, dearest Alma, and if I decided the wrong way for your real interests and wishes you must forgive me. I sat and thought about it while I recovered breath in my shady corner, and Sir John and Wynyard discussed the day's *Times*. I had come to the conclusion that I would not commit

myself to great intimacy; I would gently slide down from the familiarity of the last half-hour to something, that, while it was sufficiently friendly to be consistent, would not provoke questions from Sir John. I had, I know, called up just the right medium expression to my face, but when Wynyard got up, to take leave, and held out his hand to me — I can't account for it, Alma — it was something in his eyes, I suppose, that I could not resist, just after he had been helping me, but I actually told him that you were coming here to spend the day to-morrow, and invited him to dine with us alone, at eight o'clock."

"What did Sir John think of such a proceeding; just now, when you are seeing no one?"

"He was not well pleased at first; but he has less objection to Wynyard Anstice than to others of our friends, whom mamma thinks more of, because, as he says, he knows who he is. Then, luckily for me, he had been a little put out in the morning, when he heard I had asked you to spend the day, because we should be three for dinner, and I bethought me of remarking that my impromptu invitation was given to secure an even number. I added that you would have no objection to the *vis-à-vis* I had secured for you."

"You should not have said that."

"Well, then, I am rightly punished, for as things have turned out I have brought myself into a great — you need not smile, Alma — a serious perplexity. You bring me word that papa intends to do me the honor of dining here to-day, and I could not, no, coward as I am, I could not vex him by letting him see so soon that unexpected guests for dinner are not as welcome to Sir John as he, with his easy-going ways, has been used to make them at home. I cannot put off papa on his first offered visit; but all the same, I do tremble at the thought of what Sir John's feelings will be when he sees the party he is expected to sit down with at eight o'clock. Papa, who will come after a long day in court, with his worn, preoccupied, lord-justice look, and who must either sit opposite you, or have no one to match him."

"It is only a family party."

"Our notion of a family party is undreamed of here. Can you help me to a way out of my dilemma? Can you suggest a niceish-looking lady, who would come at an hour's notice (it is five o'clock, and growing dark already), and sit quietly opposite papa, without in any way annoying Sir John?"

"Emmie West," suggested Alma, promptly. "It would so please papa; he has a sore place in his conscience about the Wests, and is continually wanting us to do more for them, though he does not know exactly what. Mamma would not have Emmie asked to the wedding, and to my mind there is a sort of poetical justice in your being driven to invite her as your first guest. Come, be bold, I have often said that my first act of independence, when I had a house of my own, should be to ask all the Wests at once to dinner."

Constance made a gesture of despair.

"What am I to do, if you take it into your head that this house is *my own*, and that I can ask whom I please to it? Sir John has never heard of the Wests, and I never intended that he should. He has a horror of relations, and wonders sometimes whether all the boys and you will marry, dreading, I can see, to be dragged into depths of vulgarity by one or other of our clan."

"As there is no saying what we may do, you had better begin to inure him early. Little Emmie West can't be looked upon as an eyesore, seated opposite to papa at dinner, I should think."

"I don't know; I have dreadful recollections of Emmie West at our Christmas parties, in scrippy, washed muslin dresses, eked out at the bottom with cheap edging, and with shoes, and gloves, and ribbons that looked as if they had come out of Noah's ark. If that was the result when there had been weeks of preparation, I tremble to think what would be the effect of a hasty toilette."

"Better perhaps; or stay, let us bring her here, and you shall make her a present of one of those pretty evening dresses you talk of burying. It would be a cheap bit of good nature, Connie, since you never mean to wear any of them again yourself. I will back Emmie West not to look the least bit like a poor relation, when we have dressed her up. She is just your height, and I have always had my doubts as to whether she would not turn out to be prettier than any one of us, if she were properly dressed."

"I should like it," said Constance, "and it is perhaps the best thing to do, for I don't think Sir John objects to anything in the world so much as sitting down an uneven number at dinner. Poor Aunt West will be immensely gratified at my calling on her so soon and inviting Emmie."

"It is a capital opportunity for feeling your new importance," said Alma, smiling; "and if one is to marry grandly, one may as well get all the compensating pleasures out of the situation one can."

"Have you seen much of Wynyard Anstice since I left home?" Constance asked, when the sisters were driving to Saville Street.

"He called once," said Alma, the more inclined to be communicative, because there was not light enough for her sister to read her face. "He called the day after your wedding, and we had a long talk together about Agatha."

"Oh!" said Constance thoughtfully. "Then I know what happened. One can't help opening out when one talks of Agatha. I suppose I did right to go and see her in her convent when I was close to her, but it cost me a terrible fit of crying. She wanted to hear all about Sir John and my engagement, questioning me in her old earnest way; and do you know, Alma, I found that I could not answer. I could not speak about my marriage to her as I had spoken of it to other people. It looked suddenly such a solemn thing—done forever—and I could not feel just then that I had had reason enough. In that little bare room, with Agatha in her serge dress, sitting by me—all mere outside things looked so small and mean."

Alma did not say what she thought: "You know then that you have only got outside things." She put her hand over her sister's, and sat silently waiting, not without a little quick beating of the heart, for Constance to bring out the connecting thought between her first and her last remark, which she certainly had not expressed so far.

It came at length in a thoughtful tone. "I felt sure something had happened between you and Wynyard Anstice. When he asked after you there was a tone in his voice that told me —"

"No! no!—there is nothing to tell—you must not be fanciful. I assure you that nothing passed; but, as I said before, talk about Agatha."

"Ah! but you must have said something without knowing it, perhaps, that has made him think better of you than he did a little while ago. He felt bitterly about the change in our manner to him at one time. I used sometimes to think he more than half despised us all; and though he hovered about you, he felt his liking for you a sort of bondage, and hated it in his heart. Now, there is a change, and I am afraid,

dear, that unless you have courage to go against mamma, you will have to do once again all that it cost you so much to do a year ago. You are a great deal stronger than I am, Alma, perhaps it would not be so difficult for *you* to get your own way, if this is what you wish, and make what people call a love-match. I am not advising it, of course; only, if one could marry a man one loved — so truly that one was not the least bit afraid of him — I think sometimes it might be worth a struggle, or even giving up a little worldly prosperity for such rest as that would be."

From Fraser's Magazine.
AMONG THE BURMESE.

I.

It has been my lot to spend the greater part of ten years among the Burmese, a people little known except in a few regiments of the English army and to a handful of merchants and Indian officers whom duty or business leads, generally much against their will, to the isolated province which forms the farthest boundary of the Indian empire; and a time of enforced leisure offers a strong temptation to describe, so far as I may be justified by the recollections of an ordinary observer, some of the traits of the character and some of the scenes of the daily life of one of the most remarkable among the many peoples who own allegiance to the empress of India.

For the last fifty years the territory of which I write has been shared between the British government and the most primitive of Oriental despotisms, and the share allotted to England, comprising since 1853 the whole of the maritime provinces of Burmah and extending the English dominion in an unbroken line from the frontier of Bengal to the states of the Malay peninsula, constitutes a large and profitable annexe to our vast possessions on the Indian continent. The subsequent consolidation of these provinces under a separate administration subordinate to the Indian viceroy has within late years given a stimulus to their prosperity, to which striking testimony was borne not long ago by the Burmese king himself, who admitted to an English envoy, that while the towns of the inland kingdom to which he is now confined were becoming villages, the villages within the British frontier were fast becoming towns.

The possession of this province, differing widely as it does in every material respect from the Indian territories with which it is incorporated, furnishes to Englishmen an opportunity of studying at leisure, and on a wider scale than is elsewhere possible, the special characteristics, social and religious, ethnical, linguistic, and political, of a Mongolian race, and of contrasting them with those of the Aryan families which are placed in close neighborhood with them and under identical conditions. The field of interesting research which is thus opened is very wide and as yet almost unexplored. It is not, however, to any ambitious effort of research that I propose to address myself here. The rise and fall of kingdoms and dynasties, the varieties and modifications of language, the course of political relations, statistics of population and production, important and interesting as such subjects are, may be dealt with efficiently by the student at a distance from the country, but there are other matters which require for their treatment an experience which only a few can have, yet which constitute no insignificant element in the history of a people. While historians and philologists follow with toil the migrations of races and link strange companions together by a common speech, a more human interest seems to me to belong to the living aspect in the present of the peoples whose lineage and language are thus painfully made known; and for any truthful conception of this we must after all visit them in their far-off homes, drop down their rivers as comrades in their boats, hear them laugh and sing at the oar or in the field, watch them in their sports and their devotions, learn their interests and aversions, and study the daily manifestation of the character inherited from their wandering ancestry.

The Englishman for the first time transported to Burmah feels — I speak for myself — like a man realizing a fantastic dream. Quaint indeed is the outward appearance, and quaint are the speech and ways, the dress and bearing, the customs and traditions of the people which occupy this strip of territory wedged in between the overshadowing empires of India and China, yet remaining (in all but the form of government) as distinct from one as from the other. Once landed in the country, it is not necessary to go far afield for illustrations of their character and of the life they lead. Let the curtain rise on the commonest scene of every-day Burmese life: it is a scene strange enough to an

English eye, although probably so familiar to the actors that its quaintness and beauty altogether escape them.

An Englishman lounges in the verandah of a rude chalet-like house overlooking the broad stream of the Irrawady. Deputy commissioner and justice of the peace, administrator in fact of a large tract of country, he is fully aware of the importance of his office, and under a careless exterior there is pride enough in his independent and responsible charge, and jealousy enough of the welfare of the people placed under him.

Before him, crouching to the ground, with heads bowed low, hands folded as if in prayer, and eyes lifted only at intervals, are seated the members of a Burmese family, father and mother, son and daughters. In Eastern fashion they have brought an offering of fruit and flowers, the best in season, roses and orchids, plantains and oranges, or mangosteens and dorians, and laid them on the ground between themselves and their host. It is a visit purely of ceremony (though, as will be seen, not without motive), and during the leisurely conversation which follows it is easy to make notes of the outward aspect of the group. Moungh Shwe Moungh, the father, is the type of Burmese respectability, probably a tax-gatherer or other subordinate official, and his object this morning is in reality to introduce his son, whose education in the government school is now, he thinks, finished (whereas it is hardly begun), and for whom he seeks a place, however humble or ill-paid, under the wing of the all-powerful government. This object he would rather die than betray until at intervals of days, perhaps weeks, he has paid a succession of such visits of politeness, avowedly out of simple respect and for the pleasure of conversing with the beloved ruler of his district. By such tortuous ways does his Eastern nature teach him to approach the object of his desire when it depends upon the favor of his superior.

The face which thus hides what is in his heart, is of the fair Mongolian type, expressive above all things of good humor and easy living; but there is plenty of intelligence in the small eyes, which twinkle with fun at the least provocation. Cheek and chin are hairless as a boy's, and the thin, black, wiry moustache is as if it were composed of a few stray horse-hairs. A wealth of long black hair is on his head, but by a marvellous process the whole of it is compressed into a shining top-knot at the centre of the crown, round

as a cricket-ball and of the same size. A narrow turban or fillet of pure white muslin is bound round his temples, and forms an inclosure from the midst of which the top-knot rises, the pointed ends of the turban turning upwards where they meet at the back. His dress, scrupulously clean, consists of two garments; a white linen jacket with loose sleeves is fastened across his chest with buttons of pure red gold, and his lower limbs are covered by a voluminous waist-cloth of silk of some brilliant color, hanging much like a kilt, and in pattern not unlike a Highland tartan. His shoes, a sort of clogs, covered with scarlet cloth, are left (out of respect), with those of the rest of his family, at the entrance of the house, where also each has left a half-smoked cigar or cigarette, and his bare brown feet are studiously kept out of sight tucked away under the folds of his silk *pulso*. On the swarthy skin of his neck are noticed patches of red tattooing, but his dress conceals the extent to which this form of decoration really ornaments his person; of this I shall speak hereafter.

To his wife and two fair daughters I could not hope by description to do more than the most imperfect justice. There are those indeed who will say that they have never seen any beauty in a Burmese woman, and who are unable to comprehend the fascination which she is undoubtedly capable of exercising over men of every race, not only of her own kith and kin. For my part, I confess freely that at my first introduction surprise and admiration contended for the mastery: it was impossible to believe that this fair, slight girl, of delicate feature and cultivated manner, dressed in rich silks and decorated with jewels, and possessing all the repose of manner associated with high breeding, belonged to an ordinary family of no high station. For even the poorest of the women is as if she had no care beyond the adornment of herself. Her hands are soft and delicate, and she is dressed with both care and taste. Free as she happily is from the restraints imposed on her Mohammedan and Hindu sisters, the Burmese maiden or housewife is, as much as the English woman, the active manager of the household, but the sense of a continual struggle with sordid care which makes life a burden to so many a poor English drudge seems never to have come near her. Living in a genial climate and blest usually with a placid temper, the current of her life seems to roll with a truly enviable calmness.

Let me now essay a sketch of the elder of the two girls before us, a fair enough example of Burmese beauty. The features are of the unmistakable Mongolian cast, and the forehead is too contracted for intellect, but the obliquely placed eyes are dark and expressive, the long lashes droop modestly under the arched and literally pencilled eyebrows, and the natural fairness of a pale olive complexion is rendered almost white by a cosmetic powder so carefully applied as to defy detection by a stranger. For the Burmese girl recognizes to the full "the duty of a pretty woman to look pretty," and the humblest seated at her stall in the bazaar may be seen with her hand looking-glass giving the last touches to her eyebrows or complexion. Her long black hair is drawn entirely off the face, without parting, and twisted into a simple knot at the back of the head, and into this knot is stuck a rose or orchid. A flower in the hair is the invariable crown of the Burmese belle, and in these later days a spray of artificial flowers is not uncommonly worn. Her dress, consisting, like that of her father, of two garments, is very remarkable in its simplicity, while its effect is at once picturesque and characteristic. The principal garment is the *tāmīne*, a long, close-fitting petticoat of silk, which reaches from immediately below the arms to the feet and even forms a short train: folding across the bosom, it is fastened on one side, but at the upper extremity only, the greater part of its length being altogether without fastening. The sides overlap indeed, but so precarious is the protection that on a windy day a Burmese woman will often be seen crouching to the ground at the street-corner to secure her dress. The petticoat, though forming one garment, is in fact in two pieces, an upper border being of dark velvet and the rest of soft silk, woven in waves of many colors, and ending at the foot with a breadth of plain neutral tint.

The figure thus draped is usually awkward, the shoulders being too high and square, but the clinging silk gives a peculiar grace to the supple limbs. Over the *tāmīne* a long white linen jacket is worn, open in front and with tightly-fitting sleeves; and over the shoulders is thrown a scarf or handkerchief of softest silk, pale pink or primrose yellow. Some costly jewellery completes the costume (for our visitor, though of no aristocratic family, is not of the poorest class). Close round the throat is worn a veritable "rope of pearls;" from the neck to the waist de-

pend the strands of a necklace of deep red gold; and in the ears, of which the lobe has been by a gradual process stretched to a preposterous size, are massive gold earrings in the form of a tube, the extremity of which, full two inches in circumference, is set with emeralds and diamonds. Such is Mah Shwe Yuet (Miss Golden Leaf), as she sits modestly before you. Her voice is low and soft, and the Burmese language sounds musical from her lips. With shy and unaffected deference she unites a self-possession which enables her to converse easily when addressed; and while keenly appreciating the humorous, she is very ready in repartee and the arts of conversation.

I need not call special attention to the rest of the group. The elder woman is more plainly dressed in more subdued colors; but the child, whose hair is bound by a circular comb such as English children wear, is not less thickly covered with jewellery. The youth who is the cause of the visit wears no ornaments, but is cleanly and plainly dressed like his father, wearing only a turban of bright-colored silk instead of plain white muslin. He has an ingenuous, good-humored face, smooth as a berry, but in manner is the most awkward of the group.

Like all Orientals, the visitors attach no value whatever to time, and would sit in silence or desultory conversation till nightfall if undisturbed. But the visit is brought to an end by the host's intimating that he has other business, when they take their leave, each in turn offering an obeisance than which none could be more profound. The joined hands are raised three times to the forehead, and the forehead bent three times to the ground; then, as if shrinking from holy ground, with hands still folded and turned towards their host, they sidle, half stooping from his presence, avoiding, above all things, the disrespect of exposing their feet to his view.

It will be noticed that the attitude of respect in Burmah is the reverse of that which is usual elsewhere. In India the respectful native rises from a sitting position at the approach of his superior, but in Burmah a directly opposite custom prevails; and where a district officer is punctilious in such matters, you will see the people in the village street drop as he comes near, as if overcome with sudden fatigue, and crouch at the roadside with eyes averted till he has passed.

Before leaving the subject of the outward appearance of the Burmese, two characteristics must be noticed which in

every rank and in every phase of life confront and impress a new-comer. These are the universal prevalence, among the men, of the traditional custom of tattooing the body, and the still more universal habit, to which there is no limitation of age, rank, or sex, and no exception but within the Buddhist monastery, of smoking either tobacco or some compound of tobacco.

At the mention of tattooing, the English reader will be disposed to lower the Burman in his estimation to the level of the red Indian or South Sea islander, or other wild offshoot of humanity. Yet it is no mark of any such want of culture. From the educated native judge who sits on the bench to administer the law of England, who speaks and writes the English language, drives in his barouche, and attends the social gatherings of English ladies and gentlemen, to the humblest laborer in the field, every man of the population is tattooed, not at pleasure and within the limits he himself may draw, but by a rigid custom which devotes to the tattooer's art the body of every man from the waist to below the knee. Within this area every Burman is branded with a close tapestry of lions, griffins, and other fabulous monsters, in deep blue pigment, forced under the skin by a painful process. Red tattooing is confined to the upper part of the body. This necessary decoration is begun at an early age, and the prescribed surface is only gradually covered, but the severity of the treatment in the case of very young boys is the cause of no little illness, and sometimes even of death. I have myself met with only one Burman who was not thus decorated, and he was a kind of privileged mountebank, to whom the license of a clown was allowed, and who was the good-natured butt of his companions. The tattooer is proud to execute his most artistic designs (which he will display on a scroll like a tailor's patterns) on the arms of English officers, and among those who have served in Burmah the samples of his art are among the commonest relics shown to admiring friends at home. Whatever may have been the origin of this strange custom, it is considered an essential mark of manliness, and the Burmese youth who shrank from the ordeal would be regarded and treated as a "milk-sop;" and, however unnatural the custom may be, it undoubtedly has the effect of attaching a wholesome dignity to hardship, and the fearless endurance of physical pain, to which may be partly due the remarkable freedom from effeminacy which is a popular characteristic of the Burmese.

Side by side with this illustration of the hardihood of the people, a conspicuous accompaniment (whether as cause or effect) of their naturally easy and sociable temperament is the literally universal habit of smoking. Burmah is the paradise of the smoker if his paradise consists in the absence of all restraint on his favorite habit. No preacher will here hint that tobacco-smoking is the first step to drunkenness, for, with rare exceptions (and, alas! chiefly where the European has brought his vices with his civilization), the people are water-drinkers. There is no fear of offending the sensibilities of the most delicately-nurtured lady, for the women of every rank are, if possible, more inveterate smokers than the men. No dread of his master's displeasure restrains the youngest schoolboy from his cigar or cigarette. Boys and girls alike smoke as soon as they can walk, and children are even said to learn the habit before they leave their mothers' arms.

The new-comer to the country is often offended by the freedom with which a Burman who has not been much thrown with Europeans will continue to puff his cigar in his presence, in absolute innocence of any breach of courtesy: and in the indigenous school, children, even in class, only lay aside their cigars while their lungs are occupied with bawling out the trite texts of the spelling-book. A pipe is rarely seen, but cigars and cigarettes are universal, and their manufacture and sale form one of the commonest employments of the women. Some exceedingly fine tobacco is grown in parts of the province, notably in Arakan, but the cultivation is very limited, and the tobacco of which the Burmese cigar is made is almost exclusively imported from the ports on the Malabar coast. The cigars thus made are not unlike the well-known Vevey manufacture; and rank and strong as they seem to a non-smoker, they are highly popular with English residents, and not the less so from being remarkably cheap. Cigarettes are, however, even more common than cigars, and are almost always smoked in preference by women and girls. They vary in size, but the commonest is a huge cheroot-shaped cigarette of almost torch-like dimensions rolled in a green leaf, and containing, besides tobacco, spices and chips of scented wood. From these, which are as mild as hay, an immense cloud is drawn, and their only defect is that the burning chips are continually falling on the clothes of the unwary smoker: hence the graceful way in which the Burmese girl, with apparent af-

fection, but really with good reason, turns back her slender hand over her shoulder to keep the lighted end of the cigarette clear of her silken dress. At home or in the street, in the boats or in the bazaar, at every public gathering, even at those for devotion at the pagoda, night and day, men, women, and children blow the familiar cloud, and the perpetual cigarette adds not a little to the unique picture presented by a Burmese beauty.

I pass now to the character of the people of whose outward appearance I have tried to convey some picture. Even in such an interview as that I have described it is possible to note certain of the distinctive traits of Burmese character — profound submission to authority, genial temper, keen sense of humor, patience to compass an end, belief in the persuasive power of personal influence. Some of these the Burman shares with his Indian brethren, but there are others, and those the most characteristic, which he has rather in common with his English rulers. While the native of India is utterly incapable of humor, the Burman is like the veriest schoolboy in his lightheartedness and love of practical joking. While the Hindu puts his pence out to usury, money burns in the pocket of the Burman, who will also laugh with careless indifference at pain or annoyance under which the Hindu will whine helplessly. This mixture of humor and gaiety, carelessness and extravagance, has won for him not unjustly the title of the Irishman of the East. Like the Irishman, loving nothing better than a "row," he is as easily duped and as easily led. Trained, however, from infancy in the schools of the Buddhist religious, he has the habit of obedience and reverence for authority, and in the same school he has at least imbibed lessons of a high morality, however lax may be the popular interpretation of them and however imperfectly he may turn them to account. With all his *laissez-faire* disposition, he is capable of much endurance, as those can testify who have ascended a Burmese river by boat and witnessed the patient and laborious toil of the boatman day after day from sunrise to sunset. He is capable, too, of a courage which, under careful training, would probably render him a most useful soldier, and there are those who still regard as an error the disbanding of the old Burmese battalions of the Indian army. As an instance of remarkable physical courage, I have known a schoolboy commit suicide by cutting his throat rather than face the shame of a

charge of petty theft. The Burman is capable, at the same time, of a blind vindictive passion, under which no thought of penalty or retribution avails anything whatever. The jealous or injured Burmese lover is as dangerous as the man-eating tiger, not less stealthy to follow and fierce to strike his victim; and in speaking of the ordinary well-conducted native of Burmah, I am not forgetful that wilder and more lawless youths are found in no part of the world, nor are the restraints of morality or religion more patiently borne than in more civilized countries. Sincere as is my affection for the Burmese people I am not blind to their faults, and it is sad to think how closely the most glaring are linked with their nature and born in the blood. Unprotected by the presence of a strong and humane government, I fear that Burmah might see again the cold-blooded cruelties of which we know the Tartar races capable, and which fifty years ago disgraced the near forefathers of the very people who now win our regard and even affection. Corruption unblushing might again flourish through all the ranks of official life: a sensual and grasping court might again render life and property so insecure that the rich man would assume the disguise of poverty, and even the father, out of affection, disfigure his daughter's beauty. But as regards the present it may be safely said that the net result of this mixture of winning and repelling qualities is a people who appeal powerfully to the sympathy of their English rulers and guardians, and among whom the Englishman feels less hopelessly apart from a sense of companionship with the mass of those he has to rule than among the people of any other province of the Indian empire.

Men who have lived longest on the continent of India will testify that among the burdens of Anglo-Indian life none is heavier, none more increasingly hard to bear, than the consciousness of the impassable barriers which shut out all feeling of social sympathy or of kindred interests with the people by whom they are surrounded, and which each year they live in the country seems to make the distance wider between the Englishman and his darker Aryan brother. The intolerance of the earliest years of his Indian life may have passed away, but the kindlier feeling which has taken its place rather aggravates than lessens the evil. But a different tale is told by those whose lot is cast among the Mongolian races which occupy the border land between India and China — races with whom we can trace no kindred, yet,

strange to say, whose character is in many prominent points strikingly in accord with that of the Englishman. Here too, no less than in India, the English exile sighs for home, and wearies of all that is Oriental, but the weariest will own a measure of genuine sympathy with the people, and will not leave them when his time comes without much of the regret which attends the parting of friends.

Of such feature and costume, of such habit and character, are the people entrusted in this remote Eastern province to English guardianship, and whom I propose to follow into their homes and social gatherings, with the curiosity, not of the *savant* or the statistician, but of the ordinary English traveller, not too much in earnest to be unable to appreciate the romance or detect the picturesque coloring of his new surroundings, yet not so unobservant as to be altogether blinded by the charm of barbaric simplicity.

The most noticeable characteristic of the social life of the Burmese, certainly the most striking to one who has previously passed some time in India, is the paramount reign of liberty. The signs of a new and wonderful social liberty and equality force themselves at once upon the view of the traveller from Indian countries, in this happy land where caste is unknown. The Burman lights his cigar from that of the European, the Chinaman, or the native of India; and here, as in a Christian country, man greets his fellow in the street without need to ask questions of his birth or calling.

More wonderful still, in every crowd women, young and old, form a large proportion; freely, and without disguise or escort, they make their way, and their presence causes no surprise. People in England, accustomed from immemorial time to the unspeakable blessings of public and private liberty, and accepting without notice what seems as natural as the daylight, are unable to realize the slavery to which millions of men and women are capable of passive submission in less favored countries.

One of the first and most conspicuous evidences of the levelling influence of the Buddhist religion, and the social freedom which it has brought with it, which meets the eye of the stranger, is the institution of public drinking-fountains and public rest-houses for travellers. In India such an institution would be an impossibility; in Burmah it is found throughout the country, from the largest towns to the remotest villages. Among the good works by which

the pious Buddhist hopes to escape evil after death, none is more popular, or more really useful, than the provision of shelter or water for the traveller. Wherever there are habitations of men, there are the religious houses of the Buddhist hierarchy, and where these are, there also is the *sayât*, or public rest-house. Having no doors to be closed, it is, at all times free and open to all comers. Entirely unguarded, it is so substantially built as to resist for long years the influence of all weathers, and it is protected from wanton injury or profanation by the popular religious feeling to which it owes its existence. So universal is this institution, that it is the rarest thing for the English traveller in the country to carry with him the tents which in India are a necessity, knowing, as he does, that no spot is so remote that he will not find ample accommodation. The accommodation is of a rude kind, it is true, but with a few mats and curtains, such as are usually carried for the purpose, the *sayât* may always be made habitable if not comfortable.

The provision for water consists of a small raised wooden shrine, placed by the roadside, generally with a triple roof, carved and turreted like the monastery and other religious buildings, and within which a supply of water is kept up in two large earthen jars. In a land where caste reigns such provisions as these would of course be absolutely useless to the public, but in a Buddhist country no fear of contamination forbids either the weary to rest or the thirsty to drink; and certainly a residence in Burmah makes one more impatient than ever with the slavish dictates and morbid fancies of caste. "In every society there must be ranks, but there need not be castes," is a lesson which the native of India might learn with infinite advantage from his Burmese neighbor. Ranks there are as in every country, and ancestry, age, and position meet with due honor in Burmah no less than elsewhere; but the curse of hereditary caste, separating irrevocably man from his fellow, is unknown in this land of social freedom.

And the extent to which Burmese society is leavened by the spirit of liberty which thus proclaims its presence the moment you land in the country, is illustrated on a closer acquaintance with the people by the conspicuous absence of any such marked distinctions of rank as elsewhere, even in the freest country, separate the community into clearly defined classes. It is true that in a primitive society there may exist social distinctions very real and bind-

ing, which altogether escape the notice of a foreigner not very intimately acquainted with the people; but making every allowance for this, Burmese society is without doubt remarkable for a social equality which is in striking contrast with the artificial systems both of the East and West, and especially with those of India. No large land-owners hold in Burmah the position of the Bengal *samindar*; no hereditary titles distinguish the families of an exclusive aristocracy. There are indeed hereditary dignities under the Burmese government, but they are those of public office, liable at any moment to be revoked in the ever possible revolutions of Eastern politics. There are wealthy families too, distinguished above the agricultural poor, but the distinctions of rank are far less marked than in any community I know, and rich and poor are fused together by common social and religious sympathies in a way very rarely seen. Boys of every rank are taught the same lessons in the same school; rich and poor flock to the same religious festivals, the same dramatic representations, the same popular games and sports, and on the frequent occurrence of all such gatherings enjoy, like children, for days together a common *al fresco* life. And as the absence of caste differences renders such assemblies possible, so do the conditions of life in such a country prevent any marked contrasts in the simple *entourage* of the family groups which compose the rustic encampment.

Thus from many causes combined we witness in Burmah a practical example of the reign of liberty, equality, and fraternity, which might serve as an ideal for some of the most advanced of modern theorists.

Intimately connected with this characteristic is the position accorded to women in the social world, and here the contrast between Burmah and India is sharper than ever, for, as under the levelling system of Buddhism there are no distinctions of caste, so is there no artificial line drawn between the social position of men and women. Women of the lower castes are indeed to be seen in the streets of an Indian town, sparsely mingled with the crowd; but how different is the scene in a Burmese bazaar! Here not only do women form a large element in the throng, but women and girls — often in a majority — are the active agents from whose stalls the buyers are supplied. As regards intelligence, the women of Burmah yield to those of no Eastern country, and, thanks to a system of mixed village schools, conducted by lay-

men as a work of merit, they have not been left without the means of education, although in this respect they have been at a great disadvantage with the men of the community. Burmese women are no more kept in retirement than the women of Europe; and though they have always been without the opportunities afforded to their brothers in the Buddhist monastic school, this is only a fortuitous disability, due neither to any desire to imprison beauty behind walls, nor to any excessive shrinking from publicity such as is natural to the timid Hindu woman, but solely to the fact that the education of the country has for centuries been in the hands of a celibate clergy, from whose religious houses women are excluded. Notwithstanding this, the Burmese woman can generally read and write; she is at home in the sphere of domestic management, and it is commonly the housewife who not only keeps the family accounts, but who regulates the whole disposal of her husband's business. Kept under careful guardianship in childhood, the grown girl is soon allowed the most complete independence. As a rule she marries early, though not in infancy, as in India; but at all times she holds her head nearly enough on a level with her brother, and to the natural distinctions of the weaker sex is not added, as in India, the restraint of an enforced seclusion.

The subject naturally leads us to consider the social morality prevalent among the Burmese. It is urged, perhaps with justice, by the opponents of Buddhism, as an evidence of its failure, that the high morality it inculcates has not secured the practical adherence of its professors; and it may be freely admitted that the lofty standard set up by Budha himself (only a confirmation, be it remembered, in many essential points of the older Hindu law) has no more been maintained by his followers than has the simplicity of his religious teaching. But this is after all no more than may be as truly said of many a Christian country. As a matter of fact it is very difficult for the European (unless gifted with an imagination which is very rare amongst Englishmen) to place himself at the Oriental point of view as regards even the simplest of moral or social problems, and it is often only a defective imagination which leads to a needlessly harsh condemnation of customs or theories which from the totally different point of view of the Oriental are consistent with a high standard of conduct. Bearing this in mind, it certainly appears, to one who has not very

deeply studied the subject, that the standard of social morality in Burmah is by no means so low as it has been often represented, in spite of the sanction given to customs abhorrent to a Christian ideal. On one hand the marriage bond is easily contracted and easily loosed; polygamy is not unlawful (though as a rule the Burman has only one wife); temporary alliances are regarded, if not with favor, at least with good-natured indifference; and there is more than enough of open disregard of moral restraint. But on the other, the safeguards imposed not less by strong popular feeling than by the precepts of the national religion, are real and efficient; and in judging of the national standard of feeling on any subject, we must regard the estimate entertained not by the worst, but by the best of the community. Neither marriage nor divorce is possible without formal ceremony and sufficiently binding securities, while so long as the bond remains it is, as a rule, faithfully observed. From a Buddhist point of view indeed marriage is less honorable than celibacy, and the unmarried man is "happier if he so abide;" but the popular judgment reverses the ascetic theory, and so highly is the married state esteemed that a bachelor is practically regarded with less respect than he who has a wife.

Where polygamy is recognized as lawful, it is perhaps improbable, if not impossible, that the high ideal of the married state which Christian countries exhibit should ever be realized. Yet it is much in an Eastern country if polygamy is the exception and not the rule, if the obligations of the marriage tie are generally faithfully observed, if the married state is held high in popular estimation, and if the favor shown to a lax morality is avowedly only a winking at acknowledged evil, not the deliberate sanctioning of such evil as legitimate.

The following account of the Burmese marriage ceremony I have on excellent authority. After the preliminary courting (for which ample opportunities are offered in the independent life of the Burmese girl) has ended in the maiden's acceptance of her lover, the happy youth asks the "elders" of the village or community — a primitive council, which has unquestioned authority in all social matters — to accompany him to the girl's father, and formally demand his daughter's hand. If the father's consent is given, a day is fixed for the wedding, and on that day the bridegroom proceeds to the girl's house. The approach to the house is found barred

with a rope, a symbol that marriage is a retrograde step, that is to say not consonant with the purity of the Buddhist faith. The obstacle is removed, however, on payment of a sum of money. On the bridegroom's reaching the house food is prepared, and bride and bridegroom eat together out of the same dish, in presence of the "elders" and the relations of both parties. The ceremony is then complete, and the lovers are man and wife.

The traveller who, touching at the port of Rangoon, has caught a glimpse of the people of Burmah, will be at no loss to understand the interest which they arouse in those who are brought into close contact with them, and will feel some temptation to study further for himself their character and ways and manner of life; and were he to do so he would pronounce them, unless I am vastly mistaken, to be, if not the most virtuous, or intellectual, or cultivated of mankind, at least one of the most interesting and one of the happiest nations in the world. Among the questions which the thoughtful visitor to the East naturally asks himself, the first and most obvious is whether after all the presence of the Englishman, with his just laws and his material comforts, is in reality any boon to a simple Eastern people, notwithstanding all the evils of insecure life and corrupt government for which it is given in exchange. To the average Hindu or Mohammedan there is undoubtedly a far greater charm in the chances of fortune or of war than in the dull security of routine which seems so dear to a commercial people; and while the same charm probably appeals to the born gamblers who inhabit Burmah, it must be confessed that the sight of the simple village life of the country is calculated to raise in the mind of the most ardent lover of progress grave doubts whether, when we have secured to the people the peaceful enjoyment of such a life, we can add anything to it by the further revolution which must follow in the train of the education and laws, the arts and sciences, of the West.

I see in my mind's eye a village — a real village (the type of many others) — where a quiet rural happiness reigns in a setting of natural scenery such as a Burmese Wordsworth might love to immortalize. Through a bright moonlight night our boat has drifted — the boatman sleeping at his oar — down one of the broad streams which fret the whole province like a close network, and form the natural and nearly universal means of communication; and as the morning mists lift from the

water, a welcome cluster of trees is seen ahead, embosoming the quaint wooden roofs and spires of the Buddhist monastery. Close by, sparkling in the early sun, rises a graceful, cone-shaped pagoda, rich with gilding, inlaid with devices of glazed pottery, and surmounted by a tapering golden crown, from which hangs a circle of bells, which make perpetual music in the breeze. Immediately beyond and close along the high bank stretches for upwards of a mile a line of low thatched roofs, which form the "Strand" of the rural village.

Simple and primitive in the extreme is the cottage home which contents the Burmese peasant, and at first sight the low, dark, uniform cottages of such a village have only the appearance of squalor and barbarism.

In the larger towns, indeed, greater wealth and advancing civilization have raised streets of well-built houses of timber with tiled roofs, but in the villages it is only the *kyoung* or monastery, or the English-built court-house of the native magistrate, which boasts of any such pretensions, and the ordinary dwelling-house is of the simplest form and material. Given the national weapon called a *dah* — a long, slightly curved instrument, with handle and blade of equal length, and used indifferently as sword or knife — and a supply of the bamboo canes, which are as plentiful as brambles in England, and the Burman will build a house affording all the comfort and convenience that his simple life requires; indeed, his house is commonly enough of almost no other material.

I cannot refrain from digressing here to pay a brief tribute to that wonderful friend of man, the bamboo, the loveliest ornament of the tropic forest, and the most obedient servant of its inmates. Common as it is, there is no more graceful or beautiful object in nature than the bamboo in its native luxuriance, and nowhere is it seen in greater perfection than by the rivers and creeks of Burmah. As you round each bend of a Burmese river, cluster after cluster of bamboo waves a graceful salute with its spray-like foliage, and I could tell of country roads flanked by a bamboo avenue like nothing so much as a living Gothic aisle; the smooth pillar-like stems, jointed with perfect regularity, and rising on either side of the road almost perpendicularly, so gracefully is the arc described, meeting close overhead at a lofty height, and forming beneath a stillness which completes the parallel to the cathedral aisle. And when you turn

to consider the uses fulfilled by this fairy-like plant, the wonder is scarcely less. Whether in his house, or land, or the boat, in which half the Burman's life is passed, the bamboo is present everywhere in an infinite variety of forms. The main supports of the house are commonly of timber, but it is from the bamboo that the beams and rafters of floor and roof are made, the partition walls, the matting on the floor, the very string which lashes rafter and beam together, and in many cases the mat-thatch which completes the house; while within the house so built hardly a vessel but is made from, or at least indebted to, the same. On board the boat the bamboo is no less important; it floats the fisherman's net, it is his shelter from the weather, and affords the rough bedding on which he lies; it is the stake to which his boat is moored, the pole which thrusts it from the shore, and even the anchor which holds it in the stream. Under more elaborate process it forms the substance of the multiform vessels of lacquer work, which in Burmah take so largely the place of earthenware in other countries. It is the scaffolding of the builder, the laborer's basket, the child's toys, and from its branches are woven the fantastic structures so dear to the Burmese, where the *pooyay* or drama is held, and it forms the fanciful canopy which covers the coffin in the funeral procession.

To return to the village; let us see of what buildings and thoroughfares it is composed. Two long, broad streets, paved for a narrow space in the middle with bricks, run parallel with the river, and throughout their length each house is for the most part the copy of its neighbor. Raised two or three feet from the ground on posts of timber, and entered by a rude flight of steps, the cottage consists of three rooms, with an open verandah in front; one room, with the verandah, occupies the ground-floor, and the two other rooms are above, and approached by a ladder. The partition walls are of rough-plaited bamboo, and the floor is covered with a rude matting of the same material. Fireplace or chimney there is none, for none is needed, and of windows there is only one in the upper storey. The whole front of the house on the lower storey is open to the air, and its only protections from weather or intruders are the deep thatched roof covering the outer verandah, and stretching within a few feet of the ground, and the dog which mounts a volunteer guard in the doorway.

The furniture is scanty enough, for the inmates sit habitually on the floor, which is also the table on which the family meals are taken. Dishes and cups of lacquer, or coarse china, and one or two of silver, stand on a shelf by the wall. A loom, where the women weave silk or cotton, occupies one end of the room, and a massive wooden box in the corner contains the valuables of the family, whether clothes or jewels. One or two pictures, the work of native talent, hang on the wall, representing in brilliant colors impossible princes and spirits, goblins and fairies, and among them is perhaps some emblazoned advertisement from an English shop in Rangoon, which is treasured as a work of art. A baby's cradle hangs from the rafters, and a girl sits by to swing it. In the verandah a green parrot sits chained to an iron perch; and under the house, among the beams on which it rests, lurks a huge wolfish specimen of the pariah dog, mercilessly chased with sticks and stones, and yet able to make the best and most faithful of watchdogs.

Such is house after house as we pass down the street. In one the loom is at work weaving the bright textures worn alike by men and women; in the next a silversmith is hammering an embossed drinking-cup, ordered by some Englishman far away; then a chorus of youthful voices announces a mixed school of boys and girls, taught by an old man of truculent aspect; or a better class of house, the home of a sergeant of police, a dignitary of no small importance. The sons of the village are away in the rice-fields, or on the river, but old men sit smoking in their doorways, ready for a chat with any passer-by. Tall young girls, smoking green cigarettes and laughing and gossiping as they go, carry vegetables to market or water from the river. Urchins are playing in the street as they linger on their way to the monastery school. A bullock-cart creaks under its load of pineapples or sugarcane; and to the river bank are moored a crowd of boats of every size and form, from the huge craft laden with rice or earth-oil, with curved and towering stern rich in carving, like the ship of Ulysses, to the narrow and light canoe, all of them strikingly picturesque.

The public market, a long covered building, is full of buyers and sellers, and the stalls are piled with fish, fruit, and vegetables, cakes and sweetmeats, with every kind of silk, cotton, or woollen fabrics—a large proportion of Manchester manufacture—besides shoes and sandals, and

a miscellaneous collection of native and English wares, umbrellas, looking-glasses, combs, toys and trinkets, matches, twine, slates and pencils, in strange confusion and contrast. Beyond the village street, in the cool shade of the trees, is the peaceful retreat of the Buddhist religious, an ideal of seclusion; and at this morning hour a train of shorn and yellow-robed monks is passing from house to house, the foremost striking at intervals a brass triangular gong, at the sound of which from house after house some inmate comes forth to contribute of its best to the morning meal of the clergy.

And the peace which seems to reign in such a community is not altogether imaginary. The tragedy of pain, sorrow, and crime, is enacted often enough, yet there is much that is very enviable in the lot of the people. Endowed as they are with a placid temperament, fond of laughter and amusement, surrounded in abundance by all that is needed to minister to their simple wants, their life is probably as tranquil as that of any people under heaven. There is neither grinding poverty nor, under English rule, oppressive laws; life and property are secure, and nature is lavish of food and clothing. A free education is at hand for their children, and with rare exceptions, and in their most primitive state, the people are still free from two giant evils which haunt their neighbors on either side, the plagues of drunkenness and opium-smoking.

In the whole village the only discordant element seems brought by the foreigner, in the immigrant native Indian trader and usurer. Far more pushing and acute than the Burmese, naturally grasping and unscrupulous, he is more than a match for his Mongolian neighbors, from whose simplicity he reaps rich profits. The remotest village is now hardly free from the presence of some such sample of the *kalar* (the Burmese equivalent for "foreigner," and applied alike to Europeans and natives of India). Some are respectable enough, but those who know and like the Burmese in their simplicity never see without regret in the village the white jacket and turban of the *kalar*.

A village built of such materials, and standing on the brink of a tropical river, is naturally exposed also to external calamities, especially to those of fire and flood. The inflammable nature of the houses is indicated by the fact that against the wall of nearly every house leans a tall staff ending in a square piece of matting for the sole purpose of extinguishing fire; and it

may be imagined that unless quickly detected a fire in dry weather will soon reduce to ashes such a street as I have described, although those who have not seen it could less easily imagine the philosophic calmness with which such a disaster is received by the inmates of the ruined quarter.

Floods are even less resistible and hardly less disastrous for the time. In ascending the Irrawady during the southwest monsoon I have myself seen village after village temporarily deserted, every living thing washed out of its shelter, and the water above the eaves of the houses. When such a flood occurs there is great excitement and no little distress; but after all the Burman is almost amphibious, accustomed as he is to live in boats; his few household gods are easily transported, and his washed-out homestead quickly and cheaply restored.

As the flood rises, he will first abandon his lower storey and take refuge in the upper; and when this again is invaded, he will cut an opening in the roof for light and air, and live, as long as may be among the rafters, with his boat moored ever by his side for escape in the last resort.

Sanitary laws are not well understood in these remote corners of the earth, and much improvement in this respect has been effected by English rule. Generally, however, the public health is good, small-pox being perhaps the commonest of infectious complaints, but vaccination, to which the people are gradually being converted, is diminishing this. As regards medicine the Burmese are still very far behind their fellow-subjects in India, where the most rooted prejudices have long given way to the light of medical science.

In Burmah the native doctor, ignorant and superstitious, still bears a wide sway, and a late attempt to form classes for instruction in medicine in the principal towns of the province entirely failed, not from lack of interest or positive opposition, but owing to the low standard of general education as yet reached in this young province. With the advance of education there is no doubt whatever that the manifest boon of English medicine will be gratefully accepted by a people singularly free from bigotry.

In such a village as this too, the influence of post-office and telegraph has hardly made itself felt as in the larger towns; letters are usually sent by the hand of a messenger, and the postmaster-general of India still complains of the small

use made of the post-office in Burmah, and the insignificance of native correspondence compared with that in Indian provinces.

The river steamer indeed passes by almost daily, and the village children flock to the banks to see it, but it is accepted as an unexplained manifestation of the mysterious power of the "white *kalar*," causing no surprise, but conveying no new ideas, just as in England the railway train rushes and screams within a few yards of the quiet meadow, and the cattle hardly so much as raise their heads from their browsing. But notwithstanding the absence of positive advantages possessed by more advanced communities, and the presence of many evils inseparable from a primitive social state, the general outcome of the conditions of life is for the time being a quiet happiness and contentment, spread through a community bound together almost as one family by social ties, of which the sight is made the more attractive, as well as pathetic, by the reflection that in the hurry of advancing civilization the happiness may be pushed aside with the simplicity.

The present notice of this strange people may suitably end with a sketch of the scene presented by one of the popular gatherings which form a characteristic feature of Burmese social life, and where the best opportunity is offered to a foreigner of studying the unreserved manifestation of the national character, and noting the influence exercised by social and religious traditions. The most universally popular of the many occasions which serve as the excuse for Burmese merry-making is the *pooyay* or national drama. The drama is quite as much a national institution in Burmah as in any European country, and it is far more popular, and more widely known and appreciated, as it is far more accessible to the multitude. Of all the ways in which the Burman, spendthrift as he is by nature, loves to squander his little hoard as soon as it is amassed, the dearest to his heart is to call together his friends and neighbors to a *pooyay*. Actors and dancers form a recognized profession; and as their services are always available, there is none of the many popular festivities from which the dramatic representation is absent.

The occasion to which I shall now invite my reader is that of a gathering at Rangoon on the 1st of January, 1877. On that day, in the cantonment of Rangoon, as in every cantonment and civil station of India, a salvo of one hundred and one guns thundered a salute in honor of the newly-

declared empress of India, and the long list of the titles of her Imperial Majesty was pompously proclaimed to all the peoples, nations, and languages which make up the motley empire. In Rangoon thousands of Burmese, as well as people of almost every nationality under heaven, flocked together and assembled in an enormous temporary building; and among the numerous assemblies held on the same day for the same purpose, none can have been more picturesque. The vast crowd of Burmese, all dressed in their most brilliant silks and richest jewellery, were massed on each side of a central aisle and seated in the attitude of respect on mats spread on the ground, the men on one side and the women on the other, as in some modern churches; and the extent and stillness of the crowd, the sitting posture, the uniform beardless Mongolian faces, and the contrast between the gorgeous coloring of the silken turbans of the men and the shining black hair of the women decorated only with sprays of flowers, formed a singular and striking scene.

The ceremony of the proclamation was followed immediately by the presentation of medals and other marks of distinction to some of the most loyal native subjects of her Majesty, and then forthwith began the more popular business of the day in the dramatic performances.

From the centre of the building, prepared for the stage in the usual primitive fashion, are now seen advancing, in a long column towards the raised dais set apart for the government officials, a chorus of twenty Burmese girls. Tall and slight, they are dressed in a uniform of pale pink, gauzy material, which clings close to the figure, reaching to the feet, and is relieved only by drooping necklaces of silver or pearls. In her hand each girl holds a closed fan and a handkerchief. It is the best trained *corps de ballet* which the Burmese capital can produce, and is headed by the famous dancer, now almost at the end of her theatrical career, Yin-dau-mah-lay, who, old as she is, looks in her ballet costume, and with the aid of cosmetics, almost childish in the youthful grace which she throws into the dance. Utterly and entirely in contrast as the performance is with those of the ballet-girls of the West, the movements are exceedingly graceful, and though slowly and quietly performed, are such as require both long study and a marvellous suppleness of limb. As they advance every movement is made in unison by the whole troop, gracefully swaying body and arms and keeping time to a soft

chorus of their own voices unaccompanied by any instrument. In such order they advance to the foot of the dais, where they finally kneel in homage to the imperial representative, and then retire in the same graceful fashion.

This is, however, only the prelude specially arranged for this occasion to the ordinary popular drama which immediately succeeds, commencing at nightfall and continuing without intermission till daylight. The accessories of this, the favorite entertainment of the Burmese, must be here shortly described.

When we come to compare the character and surroundings of the Burmese drama with those of the Western stage, the points of contrast are to those of resemblance as a thousand to one. The essential attraction of the drama is doubtless the same as elsewhere, the charm of the mirror held up to life, and revealing in action all the complexity of its joys and sorrows, its humor, irony, and pathos; but the resemblance hardly extends farther. In the first place, notwithstanding the popularity of the drama in Burmah, there are no permanent theatres in the country. A special building is erected whenever a company of players is engaged, and the universal bamboo and *dah* provide all that is required for the shelter of the company and audience. Beneath a temporary roof mats are spread on the level surface of the ground, which is usually quite uninclosed, and open freely and without payment to the public, the sole restriction to the audience being the limits within which it is possible to see the actors and hear the dialogue, and the only passport to a good seat an early arrival. The stage is placed in the centre of the building, and consists merely of a vacant matted ring of a few yards in diameter round one of the posts which support the mat roof, and around this space on the same level are ranged the audience. Footlights are represented by a ring of blazing torches, or sometimes of lamps, planted round the central post and refreshed at intervals during the performance. Among these are hung the masks of the actors, heads of goblins and angels, lions and birds, and the quaint stiff dresses of pasteboard and tinsel and gilding, with huge projecting epaulettes, which, with bow or sword, complete the several impersonations.

Close round the stage, undistinguished at first sight from the crowd which presses hard upon them, are seated the actors and actresses. The men are in ordinary Burmese costume except when taking part in

the play: the faces of the women are rendered white almost to ghastliness with powder and cosmetics. The play is probably the representation of some well-known classical legend (modern life is, I believe, never directly placed on the Burmese stage), such as one of those which represent the previous existences of Budha, and opens perhaps with a dialogue between an imaginary prince benighted in a forest and a *beloo* or man-eating demon by which the forest is haunted. The voices are pitched in a high key, and may be heard at a considerable distance, and the dialogue is interspersed with touches of humor, sometimes not the most refined, each hit being received with laughter by the appreciative audience. To one of the actors is usually assigned the part of the clown in a pantomime, and his jokes and contortions give no less delight to the youth of Burmah than do those of the English clown to our own children.

It is a wonderful and almost weird scene which presents itself on entering such a play-house. In the still tropical night an immense concourse of men, women, and children is seated in orderly fashion on the ground, in the dim light of an occasional torch or lantern; a cigar or cigarette is in nearly every mouth: there is a subdued hum of voices, a pervading cloud of tobacco smoke, and a din of barbarous music, and in the centre of the crowd, rising conspicuous in the smoke of flaring torches, flit to and fro the grotesque figures of the players, disguised as princes and ladies, spirits and monsters of various form. The only piece on the European stage which ever recalled to me the Burmese *pooy* was the drama entitled "Babil and Bijou," in which the distant hollow voices resounding through the vast theatre, the subdued light and the fantastic forms and dresses, formed something like a civilized parallel to the rude drama of the far East.

Way is always made respectfully and good-humoredly for English visitors, who have no difficulty in securing a good place; but when once the quaintness of the scene has been fully studied, there is a wearisome monotony about the performance which soon tires the ignorant spectator. To follow such a drama so as to understand either plot or dialogue requires a very rare intimacy with the Burmese language and its various dialects; and even among officers whose daily duties necessitate a complete command over the colloquial, and who have made the language a careful study, there are probably few who

could enter fully into the appreciation of the popular play. During the performance a perpetual musical accompaniment is kept up with pauses at intervals for the dialogue, the most prominent instrument being a species of drum.

To a stranger the audience is not the least noticeable part of the spectacle. Whole families which have travelled for miles in their covered bullock-carts, bringing their provisions with them, are seated in the most picturesque groups. The elders are smoking leisurely and intent on the play, lovers are talking low, matrons are gossiping, with babies asleep in their arms, and children playing or sleeping soundly by their side: and on the outskirts of the assembly temporary provision-stalls are erected, each seller being seated by a torch or lantern.

Such is the *sat-pooy* or regular drama, to which the principal crowd is attracted; apart from the main building there is also a booth containing a minor stage, raised from the ground as in an English fair. Here a smaller group of spectators is attracted to witness the scarcely less popular acting and dancing of marionettes. These are worked with great skill, and, as the acting is accompanied by appropriate dialogue as in the old English Punch and Judy show, afford almost as much amusement as the regular play.

Thus throughout the night the crowd sits patiently and untiringly watching the performances of either kind, and it is not till the rising sun puts to shame the lurid torchlight that the play ceases (perhaps to be renewed on the evening of the same day), and the audience breaks up and quietly disperses.

It must be reserved to a future opportunity to sketch some other of the most characteristic scenes of popular life in this unique country

P. HORDERN.

From The Argosy.

THE STORY OF A LETTER.*

BY JULIA KAVANAGH.

EVERY one has heard of Sir John Percy's great lawsuit. It is a great trouble to Sir John. At least, he says so; his first, he calls it; but I always thought that his troubles began with his name. He

* This story, and two "Fragments" that will appear in due time, were found amongst the MSS. of the lamented Miss Kavanagh. Other MSS. were also found by Mrs. Kavanagh, but in too incomplete a form to admit of their being published.

claimed to be a real Percy. Ill-natured people said that his grandfather had been a greengrocer: this may be true, or it may not, but I never knew a more honorable, noble-minded man than Sir John, and I mean to say that, whatever his real origin, the Percys might have been proud of such a kinsman. There would, therefore, have been little harm in his claim of noble descent, which no one had ever dreamed of opposing, if good Sir John had not thought fit to strengthen it by assuming the temper and deportment of Hotspur. One of his favorite theories was "race," and the transmissions of hereditary peculiarities.

"My dear Sir John," I argued once, "allow me to tell you that type changes. Keen observers tell us that there actually is a periodic alteration in man. He passes from the nervous system to the plethoric, and hence physiologists declare spring those cycles of disease which are one of the puzzles of modern science."

You should have heard Sir John laugh! "My good fellow," he said, "you know nothing about it. Go to Rome: you will find Messalina or Faustina in the capitol, in old discolored marble, and you will also find her in the streets with a silver arrow in her hair, looking at you no longer with cold, stony eyes, but with a pair of sparkling black ones. Nay, more: I have seen the pure Etruscan type in Rome, a girl whom you could have painted on a vase, holding a mystic serpent in her hand. But need we go so far? Look at me! Am I not one of the old Percys in physiognomy as well as in blood? And unluckily for me have I not got that dreadful Hotspur temper which, as it cannot be vented in rebellion, or on a battle field, has brought this eternal lawsuit on my hands?"

I groaned, for about one part of this statement there could be no doubt: it was the Hotspur temper that had brought on the lawsuit, and as I candidly believe that Sir John acquired that temper to prove his descent from the same illustrious line as gave Chevy Chase its hero, and Lord Douglas his enemy, I am justified in my assertion that his troubles began with his name.

Amongst the troubles of Sir John there was one which seemed to me as real as his relationship to the Percys. He complained that all his letters did not reach him, and he laid the blame to his legal opponents. At first, he concluded that they had an agent at the post-office; then he gave up this crotchet for one as improbable, but at least more plausible: the agent was not in

the post-office, but out of it; and it was his habit to waylay the postman, and either bribe or drug him, as he might find most convenient; then abstract Sir John's letter—for this knowing agent never took but one letter, though, of course, it was always the right one. This explanation of his losses, however, had to be given up as well as the first; and Sir John's third and last conclusion was the saddest and most ominous of the three, so far, at least, as his peace of mind was concerned: he declared that the agent was one of his three female servants. His only manservant, James, was incorruptible; but Mrs. Green, the housekeeper, Ann, the cook, and Martha, the housemaid, did not, unluckily, belong to that immaculate category. They were changed repeatedly—Mrs. Green became Mrs. Long, Ann and Martha turned into Eliza and Mary, a Bramah lock was adapted to the letter-box: but letters—important letters, said Sir John, all referring to his lawsuit—continued to be lost, or, what came to the same thing, not to reach him.

I began to feel staggered. Sir John was positive, and though very angry, he preserved a sort of calmness in his anger which was unlike Hotspur's wrath, and helped to shake my scepticism. There could be no harm, at least, in trying to assist him out of this difficulty, and I undertook to provide him with a thoroughly reliable servant-girl. I applied to my sister-in-law in the country, a woman of strong sense and much penetration. I sent her down an account of Sir John's predicament, and begged of her to let us have a good, sensible, and honest girl, if she knew such a person in her neighborhood. Sir John preferred a girl from the country. "It is the lover who ruins everything," he said, "and the lover is the growth of time. If I can have a fortnight's fidelity, I shall be well pleased." By return of post my sister-in-law wrote: "I have got the very girl you want; she is a heroine, neither more nor less. She spent ten years in my cousin's family, and saved their youngest child from drowning by her presence of mind. Twice the house was attacked by burglars, and twice Nelly displayed the calmest courage. On one of those occasions she was *alone* with the children. Her fidelity is beyond suspicion. I defy any one to bribe Nelly. For the last three years she has been engaged to a young man of the best character; a carpenter; and it is for his sake as well as not to leave her mother and her little sister, that Nelly would not go to

Australia with my cousin. The children were broken-hearted at the parting."

This high-flown eulogium concluded with the intimation that Nelly would be very glad of a situation in Sir John Percy's household, and especially of the liberal terms he offered, and that she would leave S— at once, and call upon him the next day.

Sir John was taking his breakfast, when Mary, the housemaid, came in and said that "a young person wanted to speak to him."

Great was Sir John's surprise when the heroine of my sister-in-law's letter entered. A little childish thing stood before him.

"Why, my dear, how old are you?" he asked in some dismay.

"Twenty-five, sir," replied a quiet little voice.

Sir John looked at her. Yes, there were some of the lines on that young face. And, though it was a young face, with slight features, it was a remarkable face in its way: pale and resolute, with dark eyebrows, and dark eyes looking quietly at you from beneath their arch. "What is your name?" he asked, a little abruptly.

"Ellen Kelly, sir."

Yes, she was Irish, and that was a drawback. Not that the prejudice which forms a part of the traditionary John Bull found any room in Sir John Percy's mind; but he had been jilted, poor fellow, by an Irish girl, who had Ellen Kelly's eyes, and he considered this coincidence ominous. He assured me afterwards that if it had not been for my sister-in-law's sake, he would have sent Ellen back forthwith: he said so, but I rather doubt it. I have a fancy that those eyes of hers were pleasant to the good old bachelor — a memento of his young days that had a charm of its own.

"Well, Ellen," he resumed after a while, "I have heard a good account of you, and I trust you will justify it. Though you are but a small thing to be a heroine, we all know that the best goods are made up in the smallest packets. I am a good deal out, all on account of a confounded lawsuit which I have had in hand these thirty years, and I want a faithful, trustworthy servant to sit in this room and receive my letters. The housekeeper will give you some needlework to amuse you, should you need such entertainment; but you are to sit here from eight in the morning till twelve, and from two in the afternoon till evening. When you feel tired just touch that bell, and James will come and relieve you. He is too old and too active to bear the confinement — otherwise I should re-

quire no one else. And now, Nelly, please to mind my words. I suspect neither the housekeeper nor either of the two servants. I have laid traps for them, and they have come out of the snares white as driven snow; therefore I have no right to mistrust them; but I expressly desire you to act with as much prudence as if they were one and all bent upon stealing my letters. In short, you may be as civil and as friendly as you will, but you are not to trust them. That will not be pleasant, will it, eh?"

"No, sir; but I knew as much before coming."

"Well, then, as I said, you shall sit here and sew. When the postman comes, go and take the letters from him. I had a box, but I have suppressed it."

"And where shall I keep the letters if you are out, sir?"

"In your pocket, my dear, and do not let a soul lay a finger on one of them till I come in, and you hand them to me."

"Very well, sir."

"That is not all, my dear. You have relatives, I believe."

"Mother and my little sister, sir."

"Do you expect any letters from them?"

"Mother can't write, sir, and my little sister is only seven."

"Nevertheless, you expect to hear from them?"

"We have a friend, sir," replied Nelly, blushing a little, "a sort of relation of ours, who will let me know how mother and my little sister are getting on."

"In plain speech, you have got a sweetheart — don't deny it."

"I do not deny it, sir," replied Ellen, rather warmly; "we are to be married as soon as he has saved a little money to set up business on his own account."

"Quite right; but my object in putting all these questions to you is simply this: when your sweetheart writes to you, you are not, if you please, to read the letter, but simply to hand it over to me."

Ellen turned crimson. No, she could not do that. She was very sorry to disoblige Sir John, but she could not do that.

"But, my dear," he argued, with a smile, "I have not the least wish to read that young man's letter, and as soon as you have handed it to me, I shall give it back to you. I trust you with all my letters: can you not trust me with one of yours now and then?"

Still Ellen demurred. Her letter was her own, and it was plain that Ellen wished to do with her own what she pleased, and be subject to no one's control. But Sir

John was firm, or, if you like it, obstinate; and, after some hesitation, and with evident reluctance, Ellen yielded. "Mind, you give me your word to obey me in all these injunctions," said Sir John.

"Yes, sir, I do."

"Well, then, repeat them for me." Ellen did as she was bid, and she went through the series of Sir John Percy's behests with a precision and correctness that pleased him highly.

"The housekeeper shall show you your room," he said, ringing the bell; "and, when you are rested, you can begin your duties."

The housekeeper was a very sour-looking lady, and, having little cause to be pleased with the step Sir John had taken, she treated Ellen with a superciliousness which the girl had the good sense to ignore. She had come to fill a difficult position, and it was useless to quarrel with its inevitable troubles. Presently she came down in a lilac print dress, with plain white collar and sleeves, looking so trim and neat that Sir John was quite pleased with his new acquisition. He made her sit in the bow-window which commanded a view of the street door; he again rang for Mrs. Long, and requested her to provide Ellen with some darning, or mending, or making, as she pleased, and, having seen this order executed, and Ellen's little hand dive into a deep basket and come forth with a pair of his own stockings, he left her, chuckling and rubbing his hands, with a "Now we shall see."

But alas! what was glee and hope to him was darkness and tribulation to Nelly. This gloomy London parlor, looking out on a gloomy London street, filled her heart with desolation. She had parted that morning with the widowed mother, who had reared her through much poverty and sorrow; with the little sister, who clung to her, alternately kicking or weeping, as her grief prompted; with the true-hearted fellow who had loved her years so faithfully—she had left them all for this strange place, and this strange house, and oh! when should she see them again? Not for six months, perhaps; perhaps not for a year. She had done all that for a little money, tempted by Sir John Percy's liberal wages; but it was hard, very hard, and Nelly felt it keenly. She also felt the change from the country to town. How grim looked those brick houses, with their yellow blinds half drawn down; what a prison air they had, with iron railings guarding them! Nelly had been reared in a cot-

tage, with green fields around it. She had been a servant in a pretty villa standing in its own grounds. The little town where her lover lived had a garden and an orchard to almost every one of its dwellings. And then the lanes, the delicious hawthorn lanes, where they had walked together the very day before this, with Nelly's little sister Jane romping around them, and filling her pinafore with buttercups and daisies; these lanes haunted poor Nelly as she sat and mended Sir John's stockings. Should she ever hear the nightingale sing again, as it sang last night on that lime-tree which smelt so sweet? But a postman's knock came to the door. Up jumped Nelly, and away flew the dream—lane, lime-tree, nightingale and all. She went and opened it; three letters were put in her hand, and, closing the door carefully, Nelly went up with these letters to Sir John, who happened to be within.

"All right," he said; "but I am afraid it is not all right," he added abruptly. "You have been crying. Have these women already begun worrying you?"

Hotspur was up and ready for war, and Nelly hastened to assure him that no one had said a word to her—in fact, that she had not seen a soul since he had left her in the parlor.

"Then what are you crying for?" he asked, looking injured.

"I parted with them all this morning, sir, and this being the first time, and the first day, too, it seems a little hard."

"It is hard," confessed Sir John, "but time will comfort you, or at least enable you to bear it."

In her quiet way, Nelly said she hoped so, and she went back to the parlor and to her darning.

Poor Nelly! she soon had other troubles besides those of separation and remembrance. The housekeeper, the cook, and the housemaid combined to make her life wretched. Mrs. Long found fault with Nelly's sewing, and was bitter on the subject of her darnings. "There never had been such," she declared. Nelly felt this acutely. Remember how old and universal an accomplishment darning is, and then imagine, if you can, what it is to be singled out amongst all past and present darnings as the very worst of the lot. It was enough to crush Nelly's spirit forever. The cook said nothing: "Deeds, not words," doubtless was her motto; but she made it a rule to make Nelly eat what she disliked. Nelly hated fat, and Nelly got none but fat meat. Nelly disliked Yorkshire pudding, and Yorkshire pud-

ding became a rule in Sir John's kitchen. The housemaid, too, would not be behind-hand. It had been her duty to receive the letters and to attend to the door. Not being now allowed to do the one, she lofly resolved not to do the other. But Nelly, who had been quiet hitherto, and scorned to complain, now rebelled, and shewed some spirit. It was contrary to her instructions to open the door to any one save the postman, for he might come whilst she was showing a visitor up-stairs. She laid the case before Sir John. Hotspur flew into a towering passion, and threatened cook, maid, and housekeeper with instant dismissal, if they ever meddled with Ellen again. Nelly had not been loved before, but now she was fairly hated. I fancy hers was no pleasant life, sitting darning stockings in that grim old parlor, taking in letters, and feeling herself detested in the regions below as well as in the housekeeper's room above. But, if his little maid looked rather pale and melancholy, Sir John was in tip-top spirits: he had not lost a letter, so he said, at least, since he had had Nelly. "The dearest little janitress that ever was," he said, "and true as steel, sir. They laid a plot to get her away from the door, but Nelly came and told me all about it. And I gave them a trimming, sir, by Jove, I did!"

A month and a day had Nelly been with Sir John when the postman gave her a packet of letters one morning. Nelly's heart beat as she looked at them. There was one for her. It had the S— postmark upon it; besides, Nelly knew the writing. Now, there is a shy, delicate instinct in a girl's love—a feeling that makes her wish to hide what she is not ashamed of. Nelly longed to slip that dear letter into her pocket, and not let Sir John have a look at it. But she remembered her promise, and went up with it as well as the rest. "Oh! one for you," he said, detecting the stiff, round handwriting at once; "there's a good girl, I shall not keep you in pain: go down with it at once." Nell obeyed. She had a warm, impetuous little heart, I suppose, spite her calm face, for she was no sooner out on the staircase than she broke the seal and read her lover's epistle. But alas! no dear, no glad, home fragrance did that little sheet of paper enfold: nothing came out of it but the dreariest and the saddest news. Sir John had not got half through his first letter when the door of his study opened and Nelly broke in upon him, pale, distracted, and her open letter in her hand. "I must go, sir," she cried, "I

must go at once. My mother is dying—she is dying, dying."

She seemed beside herself with grief. Sir John took up the letter she had dropped, and glanced over it. Yes, sure enough, Nelly's mother was dying, and asked to see her daughter "once more."

"Of course you must go," he said warmly. "I cannot spare you to-day, but you shall start to-morrow morning."

"To-morrow, sir: will death wait till to-morrow? I must go now—now."

"My dear child, I am to be out all day, and I expect a most important letter, and James, poor fellow, is lying ill in bed, as you know—I cannot spare you to-day."

"Sir John," resolutely said Nelly, "I shall go to-day. I am sorry to disoblige you; but I shall go."

"Hotspur had a great deal to do to keep his temper down," said Sir John, when he told me this, "especially as the little chit's black eyes had just a lurk in them which I remembered rather too well. However, I remained quite cool, and all I said was: 'Well, Nelly, I have servants to obey me, and not to have their own way. I give you a month's warning from this very day.'"

"Very well, sir," composedly replied Nelly. "I am sorry to have annoyed you, but I cannot help it."

Hotspur deigned her no answer, and Nelly went. S— is within two hours of London by rail. It was three o'clock when Nelly reached it. She had to walk a mile from the station to her mother's cottage. Her road lay along the very lane in which she had wandered with her lover a month back; but how sad and changed was its aspect! Its June beauty was gone. The hot July sun had scorched it. The hedges were white with dust; the trees looked athirst for rain; the sky was grey and lowering, and the beautiful country seemed sad and plague-stricken to poor Ellen. "I felt sure, sir," she said to me later, "that my poor mother was dead."

At length she reached the cottage. Her hand shook as she raised the latch and entered. Her lover was the first person whom she saw. He came forward and comforted her with a word.

"Alive and better, Nelly."

"Better!" If he had said "cured," Nelly's joy could scarcely have been greater. She cried, she laughed, she kissed her little sister, her mother, her lover, Mrs. Dering, a kind neighbor who had come in to nurse the sick woman. She could have kissed the ground in the gladness of her heart. Yes, the poor

woman who had been dying the day before was better now, and, what was more, the doctor felt sure, from the turn her complaint had taken, that she would live. This glad news Nelly's lover gave her outside the cottage door, for the invalid was too low to hear much.

"You have had a useless journey, Nelly," said Mrs. Dering, coming out to join the pair, "but we had to send for you to quiet the poor dear."

"And do you really think she is safe now, Mrs. Dering?"

"The doctor says he is almost sure of her, Nelly. And how do you like your place? Your mother says it is such a good one."

Nelly answered that it was a very good place indeed; but she sighed as she remembered Sir John's warning.

"You'll be saving lots of money, and coming back to marry Joseph," continued Mrs. Dering.

"I hope so," said Joseph cordially.

This Joseph was a very good fellow, a steady workman, and he adored Nelly, but he was not very bright, and Nelly never told him her little secret. So, even after Mrs. Dering left them and entered the cottage, she said nothing about Sir John's warning. She knew what a shock it would be to her sick mother, and suppose Joseph should let it out? Joseph was so happy to see his mistress again that he was in the highest spirits. He could talk of nothing but the future, and he could not see that future unless under the rosiest aspect. His song had but one burden to it. Sir John's twenty pounds a year, Ellen's savings, and wedded bliss.

Matters, as he viewed them, went on delightfully. Nelly was to save thirty pounds, and he, Joseph, thirty more. With sixty pounds they could begin life. Of course, this would take time; Nelly must send money home, and Joseph had his aged and helpless grandfather to support; but "with time," argued Joseph, "it could be done." And again followed a glimpse of that married life for which Joseph had been pining for years, as only the poor can pine for love, home, and woman. Nelly heard him, and said not a word. She was very glad to have found her mother alive and "safe," as she said, but a darkness had come over her joy. "Poor fellow! if he knew the truth," she thought, as she listened to him, "and if he knew that every word he utters is a stab to me!" But every one seemed bent on tormenting her. Mrs. Dering came out again and extolled Nelly's place and salary.

Little Jane, hearing so much about money, wanted to know what Nelly was going to give her; and when the sick woman was able to speak, her first words were an injunction on her daughter not to exceed her leave of absence. Nelly must not vex Sir John on any account. She became so excitable on this head that, to pacify her, Ellen asked if she should go away by the night train.

"Yes, you had better, my dear," replied her mother, rather eagerly.

She was as anxious to see her daughter depart as she had been to make her come. Nelly herself was not so sorry to go. The burden of her secret was too much for her. As she left the cottage, Mrs. Dering followed her out mysteriously.

"Ellen," she said, "I have some money unknown to my husband, and I want poor William to have it. You just take it for me, and he will call for it in a day or two. I can't send it by the post."

She slipped a little silky packet in Nelly's hand. "And do take care of it," she whispered again, "for it is four five-pound notes, Nelly."

Ellen hesitated. William, Mrs. Dering's son by a first husband, had been so beaten and ill-used by his stepfather that he had run away to London years before. But misfortune had followed him, and he was now a sickly widower with three little children.

"You cannot refuse doing that for me," said Mrs. Dering.

"No, no, Mrs. Dering, I will do it with pleasure. But it is such a large sum — suppose I should lose it?"

"You'll not lose it, Nelly; there, take it, and do not tell any one."

"Any one" meant Joseph, who now came up to escort Nelly to the station. They walked along the shady lane, arm in arm, and, as they had plenty of time, poor things, they lingered. Nelly felt much depressed when they parted at the station, and Joseph saw it.

"You are fretting about your mother," he said. "I am sure she'll do, Nelly; but I'll be sure to write."

"No," said Nelly nervously, "no news is good news — only write if she gets bad again."

Nelly had her reason for this. "How should I bear the suspense if Sir John was out?" she thought. But Joseph said, a little shortly, "Very well, when I write you will know it is bad news."

Nelly wanted to explain, but she had no time to do so. The train was going to start.

"Make haste," said Joseph, hurrying her away. "It is only writing him a line when I get to London," thought Nelly. "Poor Joe! he was hurt."

An accident which had taken place on the line delayed the train, so that it was nine in the morning when it reached the station. Sir John lived at the other end of the town, and it was ten by the time Ellen got to his house. James opened the door for her, and very cross James looked. The poor fellow had been kept on duty almost the whole time she was away.

"A pretty mess you made of it, ma'am," he said, with sarcastic politeness, "and a nice way poor Sir John and I have been in all the time."

"I have not been twenty-four hours away, James," answered Ellen, "and if you will just let me go up and change my dress, I shall be down directly. You can tell Sir John so."

"Sir John is out," was the short reply. "How's your mother," he added, more kindly.

"Much better, thank you."

If Nelly had but said "Much worse," James would have been softened thoroughly, but "Much better" showed what a perverse, tormenting little creature she had been; so he roughly bade her not be long; and when Ellen came down he did not wait till she reached the bottom of the staircase to go out of the front door. Ellen entered the parlor, and went and sat down in her usual place. She felt giddy with fatigue, and her first feeling was to long for more complete rest than that of waiting for Sir John's letters. She looked out languidly through the wire blind that protected her from the indiscreet glances of passers-by. Darker and duller than ever seemed the houses. Well, she should soon cease to look at them. A month would soon be over, and then she would go back to her mother and Joseph and Mrs. Dering. Here an awful blank followed — what had become of Mrs. Dering's twenty pounds? Ellen rushed up-stairs like a mad thing. She searched the clothes she had just taken off — no trace of Mrs. Dering's money did she find. It was lost; that money which the poor mother had taken years to put by for her sick son and his three children was utterly lost.

Ellen's first feeling was one of stupor; then she asked herself the usual question: "What am I to do?"

Ellen had been ten years a servant. She had had to help her mother and her little sister; she had not saved much money; fifteen pounds and ten shillings in

all. That money she must now give up to Mrs. Dering, and yet it would not cover her debt. But could Mrs. Dering's money be really lost? It seemed impossible; she searched again with renewed ardor, but the money she had not. She could not imagine how or when it had left her possession — in the lane, on her way to the station, in the railway carriage, or in the cab that had brought her to Sir John's door; but one thing was sure, she had had it, and she had not got it now. To the rich the loss of money is generally light; to the poor it is almost always calamitous. In a moment all the consequences of Ellen's loss rushed to her mind; Mrs. Dering's son must suffer, then Nelly herself. Adieu to many little comforts; adieu to love; adieu to hope itself. The poor girl could not bear these thoughts. She flung herself on her bed and burst into tears. But she was not even allowed to indulge her grief. The postman's knock at the door below reminded Nelly that in her own concerns she had forgotten her master's. She flew down-stairs, and she reached the door just as the maid was opening it. Mary looked anything but charmed at Ellen's hasty appearance, and, turning up her nose, she said scornfully, "Perhaps, ma'am, you'll be kind enough to let me have my letter." "There is none for you," replied Nelly, glancing over the letters which the postman had put in her hand; "but, oh, my goodness! there is one for me!"

It was a letter from Joseph, with the London postmark. With a trembling hand Ellen was going to break the seal, when Mary's mocking eye fastened upon her reminded her of her promise. She had forgotten all about it, but she remembered it now: she could not open that letter till she received it from Sir John's own hands. And Sir John was out; he would not come back till dinner-time.

Ellen entered the parlor and sat down, with the letter on her knees. She looked at it as surely letter was never looked at before. Within that square envelope lay Nelly's fate. Either Joseph had written to say that her mother had had a relapse — how she remembered his words, "When I write, you'll know it is bad news"! — or he had despatched this letter, following so close on her steps, to tell her that Mrs. Dering's money was safe. The very London postmark was a sign, only it could be read either way. It was plain that something had occurred just after her departure, and which Joseph, on reaching home, had wished to impart to her. He had evidently found some one going to Lon-

don by the early morning train to whom he had given his letter that she might get it half a day sooner. Yes, all that was plain enough, but it helped her nowise to a solution of the mystery. Joseph knew nothing about Mrs. Dering's money, and, as the lane was dark when he went home after parting from her, he could not possibly find four five-pound notes. Moreover, Nelly searched her memory well, and she was sure that she had not once put her hand in her pocket whilst Joseph and she walked to the station. Then the letter could not refer to the money; it must be to tell her that her mother was worse, and that she, Nelly, must go back at once!

When this thought came to her, Nelly's hand was at once on the letter ready to break the seal, but she remembered her promise, and she paused. What if the letter only referred to the money? What if it was only being patient and doing her duty? For it was her duty. Sir John had given her warning, but she still was his servant, and she still owed him obedience. She had made a promise which she was free to withhold, but, having made it, she was not free to break it. Poor Nelly! I have often wondered how she resisted such temptation. For do not suppose that Satan did not offer her many an outlet. "Break the seal," he whispered, "read your letter, then go up-stairs, seal it again with red wax like this, and just tell me if Sir John will be any worse for it? It is your letter after all! Think of your long agony till he comes home, and do this: who will be the wiser?" This was cruelly plausible, and are there many men and women who could have resisted either that suggestion, or the bolder and more honest one of breaking her promise altogether, and not concealing from her master that she had done so? What had Nelly to lose? He had given her warning; this fine situation, with its twenty pounds a year, was gone; she had risked it to comply with her sick mother's wish, and she did not repent having done so. Why should she not win peace when all was lost and risk was gone?

Why are not conscience, integrity, and honor mere words, and not awful realities? Nelly could not do this thing. The sacredness of her word stood between her and her desire like the angel's flaming sword between man and Paradise. For, after all, her reading the letter would change nothing. It would not give her dying mother life, or restore Mrs. Dering's lost money. "Well, then, I must and I will bear it," thought Ellen.

And she bore it. What tortures Nelly suffered, as she sat in that dull parlor on a sultry July day, with Joseph's letter on her lap, she never told — perhaps she could not. Great mental or physical pain can never be remembered in its intensity, for to remember it would be to go through it again, and Providence is too merciful to inflict the same pang twice over. Still, it must surely have been something terrible for the poor girl to let the slow hours go by and hear the kitchen clock ticking below. Cook and housemaid were very merry together that day. How cruel and how mocking sounded their loud laughter and their idle talk! If she could even have told them her trouble; it might have eased her. "But they hate me," thought Nelly, her heart swelling at the thought. They certainly did not love her, and, though Nelly was a good girl, she had little, short, precise ways; which free, easy, unscrupulous natures must dislike. Not a soul came near her. She sat unheeded and forgotten, neither eating nor drinking nor stirring — but looking at Joseph's letter on her lap and feeling: "Will he ever come?"

When the hour of Sir John's return drew nigh, the suspense grew to be almost intolerable. There was nothing which poor Ellen did not imagine. Suppose he dined out; suppose he did not come back till the morning. Could she or ought she to bear it? Surely, in such a case, she must be freed of her promise. She had never pledged herself to an indefinite waiting.

Sir John was the most punctual of men. He dined at six exactly. Yet at five minutes past six he wasn't at home. "He is not coming home to-day," thought Ellen. Her hand was on the letter; but she paused. "I shall wait till the clock strikes the quarter," she thought, "then I shall see what I am to do."

She had not to wait so long. At ten minutes past six Sir John's knock was heard. Nelly ought to have flown and opened to him, but she did not. Now that deliverance had come, she shrank from it as if it had been a calamity. She never stirred till Sir John entered the room, and, seeing her, rather shortly asked, "Any letters?"

Nelly placed all the letters in his hand. He saw hers, and gave it back to her without a word. Nelly took it and left the room. Sir John was a slow, deliberate man. When one of his letters was sealed, he never broke the seal, but cut the paper round it. He rang the bell to ask Nelly

for a pair of scissors. She came in staggering, and, before Sir John could utter his commands, Nelly was in a dead swoon at his feet. "Bless my soul! what is the matter with the girl?" cried poor Sir John, very much startled. He picked her up, and, in so doing, saw a little bit of crumpled paper in her hand. I trust no one will think the worse of Sir John for looking at that paper. It was a short missive—and ran thus: "Money is all safe; mother is getting better and better. Yours truly, J. M."

So it was all right; but the sudden relief had been too much for Nelly. This, however, was Greek to her master. So he rang the bell, and, thanks to water, vinegar, and burnt feathers, Ellen was got round. But she was so weak by the bitter suspense of seven hours that it was some time before she could answer Sir John's questions and tell him her story. She related it very simply, but he heard it with the deepest amazement. "By Jove," he cried, "there was never anything like it—never! And so, not knowing but that the money was lost or your mother worse, you would not read the letter."

"No, sir," quietly answered Nelly, "I could not break my word."

"You are a noble girl," cried Sir John, with a touch of Hotspur enthusiasm, "and I'll tell you what, Nelly, if I was ten years younger—I would marry you."

"But I would not marry you, Sir John," demurely answered Nelly.

"Of course you would not," he ruefully replied. "You would not jilt a man, and poison the rest of his life. You would not do that."

That absurd Sir John! with poisoning his life indeed! I wonder how much poison it takes to produce my worthy friend's—I will not say how many stone; or to give a man that bluff rosy face, or that hearty voice and jovial "Ha! ha!" Poison indeed!

There came another letter from Joseph the next morning, explaining everything.

Need I say that Sir John rescinded the warning he had given Nelly, and that he authorized her to open her letters the moment the postman put them into her hands. So, though he was out, she read this one, which, as I said, explained everything. Ten minutes after Nelly had left her mother's cottage, Mrs. Dering found the notes in the garden. As soon as Joseph returned she told him the whole story. At once he wrote, but it was too late for the post, so Joseph went to the station, and a friend whom he had there promised to find

him a safe messenger in one of the guards, by whom his letter should be posted in London as soon as the first train came in.

"Oh, Joseph, Joseph!" thought Nelly, "if you had only written your letter outside instead of inside, what a world of misery you would have spared me."

"Why did he not send you a telegram?" indignantly asked Sir John. "But, sir," argued Nelly, "I should not have opened that either; besides the letter came as fast as myself—it was all the promise."

Yes, it was all the promise, and Sir John did his best to atone. Nelly and Joseph have been married years, and their prosperity is not the mere offspring of their labor and industry. A kind helping hand has often been stretched out towards them. "But I owed Nelly more than I ever did for her," says Hotspur. "Would you believe it, sir, ever since that girl left my house my letters have gone wrong again!"

I have no doubt Sir John would like me to believe *that*. As if I could!

From The Nineteenth Century.

WHAT THE SUN IS MADE OF.

SLOWLY, but very surely, by means of quiet sap, but little of which meets the eye, are we effecting an entrance into the treasure-houses wherein are kept the secrets of the sun. How different are they from those of Troy and Mycenæ! How changed the standpoint of human thought and interest when we pass from one to the other; the glorious past with a still glorious future faces a future almost without a past. Religion, art, and a humanity which furnish us with the spectacle of the apotheosis of a tribe on the one hand, views of an indefinitely extended nature which dwarf the whole solar system on the other.

It is because the secrets of the sun include the cipher in which the light-messages from external nature in all its vastness are written that those interested in the "new learning," as the chemistry of space may certainly be considered, are so anxious to get at and possess them.

I purpose to show in the following pages that even if centuries must elapse before the ingenuity of man will succeed in doing for celestial hieroglyphics what it has already done for Egyptian ones, in one direction at least an alphabet is already being formulated.

The attempts which are now being made

to "cull the secret," not "from the latest moon," but from the brilliant orb of day in the various new fields of thought and work recently opened up, may be conveniently divided into three perfectly distinct branches. We have, first, that extremely important inquiry which has as its result the complete determination of the position of everything which happens on the sun. This, of course, includes a complete cataloguing of the spots on the sun which have been observed time out of mind, and also of those solar prominences the means of observing which have not been so long within our reach. It is of the highest importance that these data should be accumulated, more especially, because it has been found that both in the case of spots and prominences there are distinct cycles which, in the future, may not only be very much fuller of meaning to us than they seem to be at present, but may even satisfy the representatives of the *cui bono* school who, I suppose, see in Priam's treasure but so many ounces of gold.

This brings me to refer to the second branch of the work; and it is this: These various cycles of the spots and prominences have long occupied the attention both of meteorologists and magneticians; and one of the most interesting fields of modern inquiry, a field in which very considerable activity has been displayed in the last few years, is one which seeks to connect these various indications of changes in the sun with changes in our own atmosphere.

The sun, of course, is the only variable that we have. Taking the old view of the elements, we have fire represented by our sun, variable if our sun is variable; earth, air, and water, in this planet of ours, we must recognize as constants. From this point of view, therefore, it is not at all to be wondered at that both magneticians and meteorologists should have already traced home to solar changes a great many of the changes with which we are more familiar. This second line of activity depends obviously upon the work done in the first, which records the number (the increasing or decreasing number) of the spots and prominences, and the variations in the positions which these phenomena occupy on the surface of the sun. As a result of this work, then, we shall have a complete cataloguing of everything on the sun, and a complete comparison of everything which changes on the sun with every meteorological phenomenon which is changeable in our planet. Some of these comparisons I have already had an opportunity of dis-

cussing in these pages in conjunction with my friend Dr. Hunter.

When we come to the third branch of the work, the newest parallel in the quiet sap to which I have already referred, things are not in such a good condition. The miners are too few; and one of the objects of any one who is interested in this kind of knowledge at the present moment must be to see if he cannot induce other workers to come into the field.

The attempt to investigate the chemistry of the sun, independently even of the physical problems which are, and indeed must be, connected with such an inquiry, is an attempt almost to do the impossible unless a very considerable amount of time and a very considerable number of men be engaged upon the work. If we can get as many investigators to take up questions dealing with the chemistry of the sun as we find already in other branches of knowledge more closely connected with the old curriculum of studies, we may be certain that the future advance of our knowledge of the sun will be associated with a future advance of very many of those very problems which at the present moment seem absolutely disconnected, and indeed distract attention, from it.

I have, in the present paper, to limit myself to this chemical branch of the inquiry; and I shall begin by referring to the characteristics of the more recent work with which I shall have to deal.

Here, as in other regions of physical and chemical inquiry, advance depends largely upon the improved methods which all divisions of science are now placing at the disposal of all others. Our knowledge of the chemical nature of the sun is now being as much advanced by photography, for instance, as that descriptive work of which I wrote in the first instance, which deals with the chronicling and location of the various phenomena, has, in its turn, been advanced by the aid of photography. The increased power in this direction recently realized by Dr. Janssen is one which was absolutely undreamt of only a few years ago. It is now possible to record every change which goes on on the sun down to a region so small that one hardly likes to challenge belief by mentioning it. Changes under one second of angular magnitude in the centre of the sun's disk can now be faithfully recorded and watched from hour to hour; in other words, changes in cloud regions ten miles square in a body ninety-two million miles away can now be chronicled.

One of the advantages which has come

from the introduction of new apparatus has been the possibility of making maps of the solar lines and of the metallic lines which have to be compared with them on a very large scale. Thanks to the generosity of Mr. Rutherford, the distinguished American astronomer, who is making the most magnificent diffraction-gratings which the world has ever seen, and who is spreading them broadcast among workers in science, we have now easy means of obtaining with inexpensive apparatus a spectrum of the sun, and of mapping it on such a scale that the fine line of light which is allowed to come through the slit is drawn out into a band or spectrum half a furlong long. A complete spectrum on this scale, when complete (as I hope it some day will be, though certainly not in our time), from the ultra-violet, already mapped by Mascart and Cornu, to the ultra-red, which has quite recently for the first time been brought under our ken by Captain Abney, will be three hundred and fifteen feet long. This is a considerable scale to apply to the investigation of these problems; but recent work has shown that, gigantic as the scale is, it is really not beyond what is required for honest, patient work.

So much for one of the new tools. There are others of recent application which are of very considerable importance.

Suppose, for example, instead of inquiring into the coincidence of the lines of the various metals with the dark lines in the sun's spectrum with a view of seeing whether any particular metal exists in the sun, we wish to determine the coincidence of the lines due to various gases. The method hitherto employed has been to enclose the gases in Geissler tubes, to reduce their pressure, and in that way to fine down the lines. The importance of this apparently small matter can be very well demonstrated by an easy experiment, the point of which is that, if we vary the density of any vapor, we vary sometimes to a very considerable extent the thickness and intensity of the lines observed in the spectrum of that vapor.

In an article which has recently appeared in *Nature*,* I have shown how a Bunsen burner which produces a very hot flame can be constructed with two pieces of glass tubing. If a piece of sodium be held in this in an old spoon, and the flame be looked at with a small spectroscope, the variation in the thickness of the line of sodium will be readily seen. Every

change in the quantity of the vapor in the flame varies to a very considerable extent the thickness of the line.

When we make the sodium vapor as dense as possible, then the line is very thick. When we make it much less dense, the line becomes thinner. If the spectrum had been a gas-spectrum, the exact equivalent of that experiment would have been this, that the gaseous spectrum at atmospheric pressure would have given us some of the lines as thick as the sodium line was at its thickest; while on the pressure being reduced, the lines would thin.

In practice there are very great objections to the using of Geissler tubes. One very valid objection is that the gas becomes much less luminous as its pressure is reduced. The new method which here comes in and helps us is excellent in this way, it enables much of the work connected with gaseous spectra to be done at atmospheric pressure, and we get the line down as we choose, *not by reducing the pressure, but by reducing the quantity of any particular gas in a mixture.*

If we take, for instance, a spark in air and observe its spectrum, we find the lines of the constituents of atmospheric air considerably thick; but if we wish to reduce the lines, say of oxygen, down to a considerable fineness so that we can photograph them, these should be fine, in order to enable us to determine their absolute position. To accomplish this, the spark is taken in a glass vessel with two apertures and one exit tube. If we wish to observe the oxygen lines fine, the vessel is flooded with nitrogen so that there is only, say, one per cent. of oxygen present, and pass the current between the enclosed electrodes. If we wish to observe nitrogen lines fine, it is flooded with oxygen, so that there is only, say, one per cent. of nitrogen present.

In this way, by merely making an admixture in which the gas to be observed is quantitatively reduced, so that the lines which we wish to investigate are just visible in their thinnest state, we have a perfect means of doing it without any apparatus depending on the use of low pressures. A very great simplicity of work is thus introduced.

A few years ago, taking the work of Kirchhoff, Bunsen, Angström, and Thalén into consideration, and connecting it, so far as one could connect it, with those ideas in which recent eclipses have been so fruitful, our chemical view of the sun's atmosphere was one something like this: We had, let us say, first of all an enormous shell of some gas, probably lighter

* Physical Science for Artists.

than hydrogen, about which we know absolutely nothing, because at present none of it has been found here. Inside this we had another shell of hydrogen; inside this we had another shell of calcium, another of magnesium, another of sodium, and then a complex shell which has been called the reversing layer, in which we got all the metals of the iron group plus such other metals as cadmium, titanium, barium, and so on. The solar atmosphere, then, from top to bottom, consisted, it was imagined, of a series of shells, the shells being due not to the outside substance existing only outside, but to the outside substance extending to the bottom of the sun's atmosphere, and encountering in it, at a certain height, another shell which again found another shell inside it, and so on; so that the composition of the solar atmosphere as one went down into it, got more and more complex; nothing was left behind, but a great many things were added.

The recent work, so far as I am acquainted with it, has not in any way upset that notion; but what it has done has been to add a considerable number of new elements to this reversing layer. Instead of the solar atmosphere consisting of about a dozen elements, it may, I think, pretty definitely be considered as consisting of about thirty.

To be more exact we had:

Highest	Hydrogen.
Medium	Magnesium, calcium, sodium.
Lowest	Iron, nickel, manganese, chromium, cobalt, barium, copper, zinc, titanium, and aluminium.

There is now evidence that the lower group, which as I have already said, forms what is termed the reversing layer, really consists of iron, nickel, manganese, chromium, cobalt, barium, copper, zinc, titanium, aluminium, *strontium, lead, cadmium, potassium, cerium, uranium, vanadium, palladium, molybdenum, indium, lithium, rubidium, cesium, bismuth, tin, lanthanum, glucinum*, and either *yttrium or erbium*.

Those metals given in italics represent the more recent additions to the list of solar elements.

At present, therefore, out of the fifty-one metals with which we are acquainted here, more than thirty are known to exist in the sun with more or less certitude.

Now it is a very remarkable thing that although the metalloids, that is, bodies such as carbon, sulphur, iodine, bromine, and the like, had been very diligently searched for, no evidence that they existed

mixed with the metals in these zones — these shells — to which I have referred has been forthcoming.

Some years ago evidence was brought forward of the possible existence of the metalloids as a group outside the metals; and the evidence for this suggestion was of the following nature: Independently of any questions connected with solar physics, all students of science now, I think, agree that the vapors of the various elementary bodies exist in different molecular states; if these different molecular states are studied, by means of the spectroscope, perfectly different spectroscopic phenomena present themselves. If we use a large induction coil for instance, we can drive every chemical substance with which we are acquainted, including carbon and silicon, into a molecular grouping which gives us what is called a line spectrum, the spectrum with which we are made familiar when we use metals or salts of metals in the electric arc.

If, however, other conditions are fulfilled, if these bodies are not so roughly handled — if, in other words, we employ a lower degree of heat, or if we use electricity so that we get quantity instead of tension, then these line-spectra die away altogether, and we have a spectrum, so called, of channelled spaces or flutings, built up of fine lines, the distances between which are perfectly regular.

Now while we got the thirty-three metals to give us line-spectra, the only evidence (very doubtful evidence) of the existence of the metalloids in the sun at all depended on the fact that, in the case of iodine and chlorine, some of the channelled-space indications given in their spectra at a very low temperature were thought to be traced among the Fraunhofer lines in the spectrum of the sun.

It is four years ago since evidence was gathered of a more conclusive kind in the case of carbon. The bright flutings due to carbon-vapor in the ultra violet have their exact equivalents among the Fraunhofer lines. This is the best-established piece of evidence, so far as I know, which seems to indicate that we have truly some of the metalloids present in the atmosphere of the sun by the coincidence of their spectra with the Fraunhofer lines. Further, carbon, at all events, we can now say with great probability, exists under such conditions that its molecular structure is very much more complex than that of the metals in the reversing layer, and therefore it exists, probably withdrawn from the excessive heat of the lower region occu-

pied by the reversing layer, which is competent, as we know from other considerations, to drive even carbon and silicon into the extremest stage of dissociation, supposing carbon and silicon to be there.

The train of reasoning which enables us to suggest that such a temperature must exist in such and such a region of the solar atmosphere, depends, in the main, upon questions raised by the differences between the spectra of certain bodies in the sun and in our laboratories.

If, for instance, one wishes to observe the coincidence between, let us say, iron and the sun, iron is placed in the electric lamp; the spectrum of the light of its vapor is photographed; above this spectrum on the same plate the spectrum of the sun is also photographed; and as a rule (I say as a rule, but this is not absolute even in the case of such metals as iron), the intensity of the iron-lines which we get from the iron vapor in our laboratories is equivalent by the intensity of the so-called iron-lines which we assume we observe in the spectrum of the sun.

That is the great argument, in fact, for the existence of iron in the sun.

But when we leave the iron group of metals, we find others in which this coincidence, this great similarity of intensity from one end of the spectrum to the other, is considerably changed. We get in the case of calcium very thick lines corresponding with very thin lines in the sun, and we get thin lines of calcium corresponding with very thick lines in the sun. In fact, the two thickest lines which have already been mapped in the spectrum of the sun are lines due to calcium. If we photograph the spectrum of calcium with a very weak arc in an electric lamp the lines most obvious in the spectrum of the sun would scarcely be visible at all on the photographic plate. If, however, we pass from the tension of the arc to the tension which is obtainable with the use of a very large coil, then we can exactly equivalent the spectrum which we get artificially with the spectrum with which the sun presents us naturally; and the more we increase the tension—the larger the coil, and the larger the jar we employ up to a certain point—the more can we make our terrestrial calcium vibrate in harmony, so to speak, with the calcium which exists in the atmosphere of the sun.

This gives us some very precious knowledge. We know that to get things into harmony, as I said before, we must employ a large induction-coil; and we know, again, that if we do employ a large induc-

tion-coil, all the beautiful flutings in the *carbon spectrum* disappear utterly; that kind of carbon is no longer present in the reaction; instead of them we have a kind of carbon which is only competent to give us bright lines; and we know that those bright lines do not exist reversed in the spectrum of the sun, though the channelled spaces do. Hence we assume the carbon to lie in a cooler and therefore higher region.

In what I have written up to this point (and I have just touched slightly on the physical side of the work, because I believe that in the future it will be most rich in teachings of the kind I have indicated), I have dealt solely with the Fraunhofer—that is the dark—lines in the solar spectrum. Now it is knowledge ten years old, that if we observe the solar spectrum with that considerable dispersion which is now imperative if we are to do much good with it, there are bright lines in the ordinary solar spectrum side by side with the dark ones.

In a paper communicated to the Royal Society in 1868, attention was drawn to these bright regions in the ordinary spectrum, and the position of certain bright lines was stated. These bright lines have since been rediscovered both by Hennessey and Cornu. I will here call especial attention to one line, because the requisite amount of dispersion is now so generally available, that any one, whenever the sun shines, may turn to β , the triple dark line in the green part of the spectrum, and see that bright line for himself. It will be found just as much outside the fourth line of δ as the third is on the other side of it. This bright line, lying in the most visible part of the spectrum, is exactly similar to many others, some of them in the yellow and some of them in the red. A careful list of these lines was made by myself some years ago; and, I am sorry to say, the list was unfortunately left in a Metropolitan Railway carriage by one of my assistants; at all events, enough was said in this and other countries about these bright lines in the years 1869 and 1870 to have given rise, at all events, to the hope that any one interested in solar physics would be perfectly familiar with them. Among other matters which called attention to the fact of their existence was a correspondence which took place in the *Comptes Rendus* of the Academy of Sciences in Paris between Father Secchi and another observer in connection with solar spots.

I have insisted upon the fact that a large dispersion is requisite to see these bright lines, because with a small dispersion bright regions of the sun are very apparent. These, however, are due to the absence of fine lines; and, indeed, if one observes the solar spectrum with considerable dispersion through a cloud which prevents the fine lines being seen, then there is a very considerable diminution in the intensity of some parts of the spectrum, and a considerable relative increase in others, where these very fine lines are present and absent respectively. When, however, considerable dispersion is employed and photography is brought into play, if precautions be taken to give sufficient exposure, these bright regions, as opposed to the bright lines, entirely disappear.

During the course of last year Dr. Draper, of New York, published the first results of a research which he has undertaken, going over very much the same ground with regard to the metalloids as had been gone over in this country with regard to the metals. Dr. Draper, who has long been known as an earnest student of science, approached this subject with a wealth of instrumental means almost beyond precedent; and his well-known skill and assiduity enabled him to accumulate facts of the very greatest importance in the course of the two or three years during which his work was carried on. I am most anxious to make these preliminary remarks, and to state my very highest respect for Dr. Draper, because in going over his work I find that some of his results are, in my opinion, open to doubt. Dr. Draper, in the first instance, apparently unaware of what has hitherto been published with regard to them, announces the discovery of the bright lines already referred to, and more than this, he bases a new theory of the solar constitution upon them. It is by no means as a stickler for priority that I regard this as a very great pity; but because I think that if the very considerable literature touching these bright lines — the papers by Young, Cornu, Henssey, Secchi, and others — had been before Dr. Draper when his memoir was written, the necessity for the establishment of a new theory of the solar spectrum, which doubtless cost him very considerable thought, would probably have been less obvious. As a matter of fact, one of the first lines recorded in the spectrum of the chromosphere in 1868 raised the whole question, because there was no dark Fraunhofer line corresponding

with it in the ordinary spectrum of the sun.

Before I proceed further it will be best to give some extracts from Dr. Draper's memoir. He writes:—

Oxygen discloses itself by bright lines or bands in the solar spectrum, and does not give dark absorption lines like the metals. We must therefore change our theory of the solar spectrum, and no longer regard it merely as a continuous spectrum with certain rays absorbed by a layer of ignited metallic vapors, but as having also bright lines and bands superposed on the background of continuous spectrum. Such a conception not only opens the way to the discovery of others of the non-metals, sulphur, phosphorus, selenium, chlorine, bromine, iodine, fluorine, carbon, etc., but also may account for some of the so-called dark lines, by regarding them as intervals between bright lines. It must be distinctly understood that in speaking of the solar spectrum here, I do not mean the spectrum of any limited area upon the disc or margin of the sun, but the spectrum of light from the whole disc. I have not used an image of the sun upon the slit of the spectroscope, but have employed the beam reflected from the flat mirror of the heliostat without any condenser.

The photograph of the solar spectrum which accompanies Dr. Draper's paper contains a spectrum of the sun compared with that of air and also some of the lines of iron and aluminium. The photograph itself is absolutely free from handwork or retouching. It is, as Dr. Draper points out, difficult to bring out in a single photograph the best points of these various substances.

There are so many variables among the conditions which conspire for the production of a spectrum that many photographs must be taken to exhaust the best combinations. The pressure of the gas, the strength of the original current, the number of Leyden jars, the separation and nature of the terminals, the number of sparks per minute, and the duration of the interruption in each spark, are examples of these variables.

Still, in the particular photograph placed in evidence, Dr. Draper is of opinion that

No close observation is needed to demonstrate to even the most casual observer that the oxygen lines are found in the sun as bright lines, while the iron lines have dark representatives.

And he gives a list of many such coincidences.

In order to be certain that a line belongs to oxygen, Dr. Draper has compared, under various pressures, the spectra of air, oxygen, nitrogen, carbonic acid, car-

buretted hydrogen, hydrogen, and cyanogen. Where these gases were in Plücker's tubes a double series of photographs has been needed, one set taken with and the other without Leyden jars.

To account for this wonderful discovery coming so late, it is urged that —

The bright lines of oxygen in the spectrum of the solar disc have not been hitherto perceived, probably from the fact that in eye-observation bright lines on a less bright background do not make the impression on the mind that dark lines do. When attention is called to their presence they are readily enough seen, even without the aid of a reference spectrum. The photograph, however, brings them into a greater prominence.

Dr. Draper then passes from facts to theory.

From purely theoretical considerations derived from terrestrial chemistry and the nebular hypothesis, the presence of oxygen in the sun might have been strongly suspected, for this element is currently stated to form eight-ninths of the water of the globe, one-third of the crust of the earth, and one-fifth of the air, and should therefore probably be a large constituent of every member of the solar system. On the other hand, the discovery of oxygen, and probably other non-metals in the sun, gives increased strength to the nebular hypothesis, because to many persons the absence of this important group has presented a considerable difficulty.

At first sight it seems rather difficult to believe that an ignited gas in the solar envelope should not be indicated by dark lines in the solar spectrum, and should appear not to act under the law, "A gas when ignited absorbs rays of the same refrangibility as those it emits." But in fact the substances hitherto investigated in the sun are really metallic vapors, hydrogen probably coming under that rule. The non-metals obviously may behave differently. It is easy to speculate on the causes of such behavior, and it may be suggested that the reason of the non-appearance of a dark line may be that the intensity of the light from a great thickness of ignited oxygen overpowers the effect of the photosphere, just as, if a person were to look at a candle flame through a yard thickness of ignited sodium vapor, he would only see bright sodium lines, and no dark absorption lines. Of course, such an explanation would necessitate the hypothesis that ignited gases such as oxygen give forth a relatively large proportion of the solar light. In the outburst of T. Coronæ Huggins showed that hydrogen could give bright lines on a background of spectrum analogous to that of the sun.

However all that may be, I have no doubt of the existence of substances other than oxygen in the sun which are only indicated by bright lines. Attention may be called to the

bright bands near G, from wave-lengths 4307 to 4337, which are only partly accounted for by oxygen. Farther investigation in the direction I have thus far pursued will lead to the discovery of other elements in the sun, but it is not proper to conceal the principle on which such researches are to be conducted for the sake of personal advantage. It is also probable that this research may furnish the key to the enigma of the D₃ or Helium line, and the 1474 K or Corona line. The case of the D₃ line strengthens the argument in favor of the apparent exemption of certain substances from the common law of the relation of emission and absorption, for while there can be no doubt of the existence of an ignited gas in the chromosphere giving this line, there is no corresponding dark line in the spectrum of the solar disc.

If these observations of Dr. Draper are endorsed, it is impossible to overrate their importance, and those studies which teach us what the sun is made of will be considerably advanced. But this is not all. Not only will our present views of the distribution of the various elemental substances in the sun's atmosphere be entirely bouleversed, but, as may have been gathered from the last quotations, a good deal of physical theory will have to go overboard also.

The existence of oxygen in the sun has hitherto been negatived, because there was no correspondence between its bright lines and the dark ones on the solar spectrum. Dr. Draper not only turns the tables upon us, but suggests that there is one law of absorption for metals, another for metalloids. In the case of most of the molecular stages of metalloids this certainly is not true, for the absorption phenomena of iodine, chlorine, sulphur, etc., are among the most beautiful in the whole range of spectrum analysis.

It is unfortunate, too, that Dr. Draper has never read, or has forgotten, what has been long written on the most probable position of the metalloids in the solar economy—that is, above (outside) the metals, exactly where, as I have already shown, carbon in all probability has been found.

But my objections do not rest on pure theory. I have gone over the ground as completely as I have been able, and as a result, I wish to point out with regard to this work of Dr. Draper's, that the photograph in which these comparisons with the oxygen lines have been made is not one which is competent to settle such an extremely important question.* Secondly,

* The spectrum between the more marked lines sug-

I do not find the coincidences between bright solar lines and oxygen lines in that part of the spectrum with which I am most familiar, for the reason that there are no bright lines in this portion of the spectrum, either visible to the eye or in a perfect photograph. Mr. Rutherford's magnificently perfect spectrum, going nearly the whole length from O to E, embraces the region included in the photograph of Dr. Draper's. I have carefully gone over a large part of this region line for line, and in no case have I found any true bright line in the sun whatever coincident with any line of oxygen whatever. I do not profess to have gone over the ground in the ultra-violet; but it will appear to me very surprising indeed if, when we go further, and include the H and K lines, Dr. Draper will find any coincidences with bright lines of the sun even there; because when perfect instrumental conditions are brought into play, no bright line whatever exists in that part of the solar spectrum, so far, at all events, as my observations extend. The bright line recorded by Cornu exists outside K.

There is an experiment which any one who possesses a spectroscope with three or four prisms can make for himself. Throw the sunlight on to the slit so that the solar spectrum may be visible. Observe the green part. Take the spark in air in an apparatus of the kind to which I have already referred, flood the air with nitrogen, and in the field of view which includes δ , and therefore one of the most marked bright lines in the solar spectrum itself, you will find in the same region of the spectrum three or four undoubted lines of oxygen. I have made that experiment, which is quite a simple one, and I find no coincidences in this part of the spectrum between the oxygen lines and the undoubted bright line.

gests ribbed structure; hence it is important to know whether the photograph was taken by means of one of the silver-on-glass gratings made by Mr. Rutherford. I find that in these, in consequence of the grating being ruled on the back surface of the glass and the double transmission of the light through the plate, there is a considerable formation of Talbot bands, and the solar spectrum is in some regions entirely hidden and absolutely transformed. Lines are made to disappear; lines are apparently produced, so that if one compares a part of the spectrum taken with one of these silver-on-glass gratings with an ordinary refraction-spectrum, the greatest precaution is requisite. Indeed, I think that I am not going beyond the mark when I say that the positions of all lines below the third or fourth order of intensity must be received with very great caution indeed when these gratings are employed. So much is this recognized by Mr. Rutherford himself, that he is now generously distributing gratings containing the same number of lines to the inch (17,300, or something like that) engraved on speculum-metal, in order that these defects may be obviated.

I do not say that Dr. Draper's alleged discovery is no discovery at all; I say, and I think it is my duty to say it, as I have been occupied in very allied work for some considerable time, that I do not hold it to be established. Dr. Draper must produce a better photograph and must prove his point for the visible spectrum before his discovery can be accepted.

I have no doubt that Dr. Draper, in spite of the difficulties he will have to encounter, will carefully attempt this; and I am certain that he will be the first to hail what I have here written with the extremest satisfaction; because his desire, I am sure, is the desire of every true man of science, that the truth should prevail.

In any case Dr. Draper has begun work in a branch of the chemical inquiry into solar matters which, up to the present time, has been sadly neglected.

The true composition of the sun will never be ascertained till the metalloids have been brought to the test as the metals have been. The reason I have considered Dr. Draper's view at such length is that this is the first serious and prolonged attempt of the kind. There is little doubt that the question I have thought it my duty to raise will be soon settled; and, whatever the result, our knowledge of what the sun is made of is certain to gain by the process.

To sum up, then, in a few words. So far as our uncontested knowledge goes the sun is chiefly made of metal, and on this account is strangely different from the crust of our earth in which the metals are in a large minority.

Surely it is very wonderful that we should have ever been able to acquire this little item of knowledge, and I feel that the subsequent work which sooner or later will be undertaken to explain this anomaly will land us in a very dreamland of science. It will be found that we poor nineteenth-century toilers and moilers were but engaged upon the white chamber and not upon the treasury at all!

J. NORMAN LOCKYER.

From The Saturday Review.
SEEING THE PRINCESS.

AFTER long residence in the quiet country it is pleasant to visit London in the height of the season, and, above all, to walk down the Park and see the carriages. Such a show of wealth and fashion the world does not elsewhere contain. You

count in five minutes more handsome and well-matched horses than can be seen among all the squires of your acquaintance. There are more pretty faces than you thought the human race could altogether boast. Many of the men look like the centaurs and athletes in the Greek sculpture you have been shown in the Museum. What splendid moustaches, what small feet, what an air, what a manner, how gracefully they take off their hats, and with what composure they speak to the lovely occupants of carriages decorated with coronets and supporters! Like a stranger in paradise, you look on at the doings of the world of which you have heard—the world of rank and riches, of nobles and beauties, of politeness and urbanity, and whatever else is meant by those terms of civilization which define the boundaries between town and country. Above all other sights, however, you desire to see the princess. It is needless to go home until that end has been attained. They would think little of you, indeed, at the next rectory tea-party if you have not something fresh to tell. And there is somebody, perhaps, to whom you have rashly promised that you will be able to pronounce more exactly as to her likeness to the royal lady of which her mother has so often told you, and which the dear bishop noticed and commented on at the opening of the restored church. How far off such scenes appear while you follow the crowd under the guardianship of a policeman, and cross the road from that nameless gate near Apsley House to the gravelled side of the drive! But see the princess you must, and is there not a possibility that you may be so fortunate as to gaze even for a moment on a still more august personage? Your mother has told you how, on a certain occasion—no matter how many years ago, for it preceded your own birth—she came to London, and drove by your father's side in a carriage, and how a young lady on horseback rode up Constitution Hill and into the Park, and how everybody stopped, and all the men took off their hats, and the women stared till the sun or some other cause brought tears into their eyes. And you remember, in particular, that this illustrious lady made a special bow at the young bride who, no matter how many years later, tells the thrilling story. Could you obtain a sight of her you feel that the welcome home would be doubly warm. Though you know so well to the contrary, yet in the dim recesses of your mind there is a feeling that a king or a queen goes

about in the regalia. Only a view of royalty in the flesh will remove it, for it is not long since you were yourself in the condition of the child of whom it is recorded that, being taken to the window to see the queen drive through the street, she accounted for the absence of a crown by the supposition that it was lent to the king for that day.

Such are perhaps the unsophistical thoughts which you revolve as you watch the glittering throng. What a country is England, that can marshal such an army of carriages on an ordinary summer afternoon! What were the chariots of Sisera of which you heard last Sunday in comparison? And every carriage filled, as you reasonably suppose, with the highest rank and the greatest wealth of a country where blood is pure and gold is plentiful. Heraldry and eyesight alike are taxed to distinguish a duke's coronet from a mere baron's, and you find that, after the first three attempts to learn off the costumes of the best-dressed ladies, memory refuses the office. You must keep your faculties fresh to observe the princess, every item of whose dress you will be expected to catalogue for the benefit of the womankind at home. You begin to wish for some one who can tell the names of the great people. That man who cursed so audibly when you trod on his toe may have been a great poet. At any rate his language was highly figurative. The wearer of the glittering hat who canters by on a pony may be a cabinet minister, and you are not sorry when your elbow is grasped by a regular town mouse—if the name of so harmless a little beast be really appropriate—whose acquaintance you have chanced to make at a country house. He is, however, rather bent on enjoying the astonishment of a country cousin as he sneers at the whole performance. No ladies, he says, of real rank would exhibit their faces in such a way to the vulgar gaze. You thank him mentally for the delicate compliment to yourself; but he goes on to remark that it is only second-rate people who come here to be stared at. There is, he continues, a certain class in London to whom notoriety is pleasant. They have titles among them, and some of them have blue blood in their veins; but for the most part their reputations are damaged, and they are anxious to proclaim the fact to all the world. This, he observes, in spite of your dissent, is a law of society, and these people pretend to constitute society. They are by no means particular as to what they do, or with whom they asso-

clate; but everybody in their set must either have rank or money. Wealth, perhaps, on the whole, is the best; but a title is almost as good. The lady whose husband has a million of money, or the credit of it, may see as many earls as she pleases, and even countesses, at her table, and has every possible opportunity of imagining that she moves in the highest circles. In these circles, it is true — so our cynic insinuates — the Ten Commandments may be of little authority, though a certain pleasure is still to be found in breaking them. Such people, he mysteriously whispers, perform their duty to their neighbor by coveting his wife, winning his money, infesting his house, driving his team, eating his dinners, slapping him on the back, and damaging his fame as much as they can in the time by deed as well as by word. These fine folks have their organs for the information of the public, organs which are read chiefly by people who, though they do not hope to shine in the same skies, yet do not feel that in any respect except name they are very much inferior. All the movements of this vortex of so-called society are recorded by their papers, while the scandals they have invented or caused are registered every week, and pretty regularly contradicted the week following. According to these interesting periodicals, the men and women in society are busily engaged either in committing or in laughing at the most atrocious offences against morals and taste. They are only serious when discussing such hard cases in ethics as where a man has to choose between adultery and perjury, or a woman between her children and the chance of spiting some one else's wife. If you endeavor to stem the flow of your friend's cynicism by pointing out that all the lovely creatures driving or riding past cannot be so depraved, he replies that he has it from their own journals, and goes on to illustrate his remarks with biographical anecdotes of the ladies and gentlemen before you. That, he says, is the marquis of something — you do not quite catch the name. He is descended in the male line from — say, the Duchess of Kendal — and thinks it a duty to his family to imitate the virtues of the ancestors by whom it was founded. He has no money, but he has rank, and the friend who addresses him so familiarly by a nickname has money enough for both, though his father began life as a bricklayer, and he only knew he had a mother by a process of simple induction. That beautiful lady, all in white, which to your mind symbolizes

the purity of mind which alone could look out of those innocent eyes, seals with a coronet, and is much admired "in society," for she is very rich; and while she remained a widow, for her gallant lord is dead some years, had every eligible young man at her feet. She married at last — no one knew exactly why, adds your mentor — and has now, to keep an advertisement standing in the papers to say that she will not pay her husband's debts. It strikes you afterwards as odd that you never happened to see the advertisement. That gentleman on horseback is remarkable chiefly for his performances at a skating-rink; he was a gold-digger in California when he came in unexpectedly for a title and estates. He retains, according to the weekly authorities in such matters, the charming frankness of demeanor acquired in his early life, and probably if you were near enough to hear what he says you would be astonished at its directness and point. There goes a very great lady in an Indian shawl. Her name attracts your attention; for her husband has an estate in your county. You ask for some particulars respecting her position. You remember that the estate is impoverished, the houses wretched, the farms rack-rented, and the old park denuded of timber; and are not surprised to hear that, though she is "in society," her reputation is none of the best; her passion is for play, and the young lord by the side of her carriage was caught long ago, and pays for her good graces some twenty thousand a year in guinea points. A familiar face attracts your gaze. That is one of the reigning beauties of the season. Her portrait is in all the shop windows. She is in the best society, and has half-a-dozen invitations for every night. Her looks are discussed each week in the "society" journals. What does her husband think of it? you innocently ask; but to this natural question you obtain no reply. There is Mrs. What's-her-name, who has had five husbands, and there are legal doubts about the validity of her present marriage. She is known "in society" as the Good Samaritan, adds your friend, at the same time bidding you farewell, and leaving you to unravel if you can the meaning of the joke. He has only allowed that here and there is to be seen a "swell of the first water," as, with some confusion of metaphor, he expresses it; but such people, he hastens to assure you, only drive through the park when it is the shortest way.

On the whole, you are not sorry to let the scandal-monger go, especially when he

has told you how to know when the princess is coming, for he makes you hate your fellow-creatures; and it does not occur to you till he is gone to ask how he comes to know so much about a society which he professes so heartily to despise. His sneers have changed your view of the scene around you, and turned all the beauty and sweetness into gall and bitterness. There is poisonous powder on every fair cheek, belladonna in every eye. You would prefer not to believe a word of what he has said. You look at the sweet faces near to convince yourself of its untruth. Yet he has shown you married ladies who have no objection to wear handsome jewelry given by open admirers, gentlemen who would not speak to an unmarried girl, young men who would cut their own mothers, and girls who know more of life than their fathers. The bloom is off the scene as you turn away from him. You may disbelieve the bulk of his slanders, but there is never smoke without some fire, and the dregs are enough to give a very nasty flavor to the cup of pleasure. You look with critical eyes at the carriage of your country member. How shabby it is here, yet how fine you thought it at home, and how pleased you were to get an occasional bow from it! As you walk along the line, however, a little of the old feeling comes back. Good or bad, the occupants of these splendid carriages are often very beautiful. They seem to you both *Angli* and *Angeli*. According to your friend, who knows "society," they are worse than heathen. Sometimes the carriages themselves are models of neatness and delicate taste, and the horses so perfectly matched that you wonder how the coachman can distinguish them. A party of four-in-hand drags has assembled at the corner, and is about to drive down to Twickenham for an evening at the Orleans. You wonder if your friend would have approved of the Orleans, or thought it a place for people of the first water. As you reflect a sleepy feeling seems to come over you. The endless roll of carriages, all going at the same pace, all going the same way, is as soporific as the manipulations of a mesmerizer. Suddenly, a thrill seems to go through everybody. Every carriage draws to the side. A policeman in very white gloves trots past. Then comes a little phaeton drawn by two gray horses. A lady, "divinely tall and most divinely fair," bows and smiles. You see a charming vision of children's faces; the carriages close in behind, and it is not till the round has begun again that you are fully aware that you have indeed seen the princess. She is so

truly well dressed that you have not even been able to distinguish the color of her bonnet strings.

From Nature.

ADMIRAL SIR GEORGE BACK.

ADMIRAL SIR GEORGE BACK, F.R.S., died on June 23d, at the age of eighty-one years. He entered the Royal Navy when twelve years old as a midshipman on board the "Arethusa," and in 1818 joined a vessel under the command of Sir John Franklin, whom he accompanied on his expedition overland from Hudson's Bay to the Coppermine River, having already taken part under Capt. Buchan in his perilous voyage of discovery made to the neighborhood of Spitzbergen. In the spring of 1825 Lieut. Back again accompanied Sir John Franklin on his second expedition to the Arctic regions for the purpose of co-operating with Capt. Beechy and Capt. Parry in their simultaneous efforts to ascertain from opposite quarters the existence of a north-west passage. Full details of this voyage will be found in Franklin's "Narrative of a Second Expedition to the Shores of the Polar Sea." Back was again appointed in the spring of 1833 to conduct the expedition fitted out for the purpose of seeking and relieving Sir John Ross, who had gone out nearly four years previously in quest of the north-west passage. A full account of the results of that hazardous enterprise, in the course of which he discovered the river which has since borne his name, Capt. Back gave to the world in his "Narrative of the Arctic Land Expedition to the Mouth of the Great Fish River and along the Shores of the Arctic Ocean in 1833-35." In 1836 Capt. Back sailed in command of another expedition to the frigid zone. The details of this expedition, in the course of which he reached Frozen Strait, almost within sight of Repulse Bay, were published by Capt. Back in his "Narrative of the Expedition in Her Majesty's Ship 'Terror,' undertaken with a view to Geographical Discovery, in 1836-37." In 1857 he obtained flag rank, but had not been afloat since that date. In 1837 Back had awarded to him the gold and silver medals of the Geographical Society. He also was honored by the gold medal of the Geographical Society of Paris, of which he was made a corresponding member. He was knighted in 1839, and elected a Fellow of the Royal Society in 1847.